

**Beverage Container Deposit Law:
A Survey of Adult Iowans**

Melvin E. Gonnerman, Jr.
Gene M. Lutz
Stephanie Ingram

Center for Social and Behavioral Research
University of Northern Iowa

prepared for the

Iowa Department of Natural Resources
Waste Management Assistance Division

December, 2000

Table of Contents

	<u>Page</u>		<u>Page</u>
<i>List of Tables</i>	iii	Use of Drop-off Recycling	33
<i>List of Figures</i>	v	Use of other programs	33
		Anticipated Use	34
Purpose & Methodology	1	Focused Analyses	38
<i>Purpose and Content Overview</i>	1	<i>Disposal Practices by Type of Recycling</i>	
<i>Methodology</i>	1	<i>Program</i>	38
<i>Statistical & Measurement Issues</i>	2	<i>Without the Refundable Deposit</i>	39
<i>Description of the Sample</i>	3	<i>Support for the Bottle Bill</i>	39
		<i>Expansion of the Bottle Bill</i>	40
Main Findings	7	<i>Attitudinal Measures</i>	40
<i>Recycling Redeemable Beverage Containers</i>	7		
Household Behavior	7	<i>Revisiting the 1998 Survey</i>	43
Consumption	8	<i>Redeemable Beverage Containers</i>	43
Disposal Practices	10	<i>Support for the Bottle Bill</i>	43
Behavioral Intentions	14	<i>Expanding the Beverage Container</i>	
<i>Nonredeemable Beverage Containers</i>	15	<i>Deposit Law</i>	45
Consumption	15	<i>Attitudinal Measures</i>	45
Disposal Practices	17	<i>Recycling Programs</i>	46
<i>Opinions About the Bottle Bill</i>	19		
Familiarity	19	<i>Summary</i>	47
Support for the Law	20		
Reasons to End the Law	22	<i>Appendix A: Iowa Department of Natural Resources</i>	
Reasons to Keep the Law	23	<i>2000 Beverage Container Recycle</i>	
Agreement with Attitudinal		<i>Questionnaire</i>	49
Statements	24		
Unredeemed Containers	26	<i>Appendix B: Explanation of Disposition Codes</i>	65
Expansion of the Bottle Bill	28		
<i>Community Recycling Programs</i>	30	<i>Appendix C: Attitudinal Statements</i>	69
Attitudinal Measures	30		
Program Availability	31	<i>Appendix D: Open Ended Responses</i>	73
Use of Curbside Recycling	32		

List of Tables

<u>Table</u>	<u>Page</u>	<u>Table</u>	<u>Page</u>
1 Final Telephone Call Dispositions	2	11 Unredeemed Container Money	27
2 Location Where the Greatest Number of Beverages from Redeemable Containers are Consumed	9	12 Recycling Attitudinal Statements	30
3 What Usually do with Empty Redeemable Beverage Containers	11	13 Types of Recycling Programs in Community	31
4 Where Usually Redeem Beverage Containers	13	14 Use Curbside Recycling	32
5 Location Where the Greatest Number of Beverages from Nonredeemable Containers are Consumed	16	15 Use Drop-off Recycling	33
6 What Usually Do with Nonredeemable Containers	18	16 Willingness to Pay for Curbside Recycling	36
7 Familiarity with Beverage Law.	19	17 Disposal of Empty Beverage Containers	38
8 Support for the Beverage Container Deposit Law.	21	18 Disposal of Containers if No Refundable Deposit	39
9 Reasons for Keeping the Deposit Law	23	19 Storing Containers is Inconvenient	40
10 Beverage Container Deposit Law Attitudinal Statements	24	20 People Would Recycle Container Using Curbside If There Were No Longer Refundable Deposits	41
		21 Inconvenience of Redeeming Containers	41

List of Figures

<u>Figure</u>	<u>Page</u>	<u>Figure</u>	<u>Page</u>
1 Gender	3	15 Disposal of nonredeemable beverage containers.	17
2 Age	3	16 Support for the beverage container deposit law.	20
3 Highest education completed	4	17 Opinion of whether or not the bottle bill should be ended	22
4 Gross annual household income	4	18 Where the money from unredeemed containers should go	27
5 Marital status	4	19 Bottle bill should be expanded to include other types of beverage containers	29
6 Community size	5	20 Bottle bill should be expanded to include teas, sports drinks, juices, and bottled water containers	29
7 Years of residency in Iowa	5	21 Agreement that there should be a national beverage container law	29
8 Location where greatest number of beverages from redeemable beverages are consumed	8	22 Availability of recycling programs in community	31
9 Where consume redeemable beverages by age ..	10	23 Anticipate use curbside recycling if it were available	34
10 Disposal practices with empty redeemable beverage containers	10	24 Willing to pay for curbside recycling service ..	35
11 Location where empty beverage containers are usually redeemed.	12	25 Amount willing to pay each month for curbside recycling	37
12 Disposal practice of empty beverage containers if there were no refundable deposit	14	26 Support of the bottle bill	43
13 Location where the greatest number of beverages from nonredeemable containers are consumed	15	27 Recycling program availability	46
14 Location where the greatest number of nonredeemable beverages are consumed by age..	17		

Purpose and Methodology

Purpose and Content Overview

This study was commissioned by the Iowa Department of Natural Resources (DNR) to assess adult Iowans' opinions on issues related to the state's beverage container deposit law. Specifically, a survey was conducted focusing on the following: (1) current recycling or redemption of empty redeemable beverage containers, (2) support for the beverage container deposit law, (3) current recycling of empty nonredeemable beverage containers, (4) support for expanding the beverage container deposit law, (5) attitudes concerning recycling and the beverage container deposit law, and (6) the use of curbside and drop-off recycling. A section of this report also presents data from a similar study¹ conducted in 1998.

Methodology

The survey population consisted of Iowa residents at least 18 years of age. The sampling frame for the survey was adult Iowans living in households with residential telephone lines. Respondents were contacted by telephone using a random-digit dialing (RDD) methodology. All data were collected via a computer assisted telephone interviewing (CATI) system at the Center for Social and Behavioral Research (CSBR) at the University of Northern Iowa. Interviewers were trained and supervised by the CSBR. Data collection began on October 10, 2000, and was concluded on October 31, 2000. Interviewing was concentrated in the hours of 5 p.m. until 9 p.m. Sunday through Thursday, weekdays from 9 a.m. until 5 p.m., and Saturdays from 10 a.m. until 2 p.m.

Using a random sample of telephone numbers drawn by Genesys Sampling Systems, a total of 4,038 telephone numbers were attempted to yield 830 completed interviews. To assure random sampling within each household, interviewers asked to speak with the adult with the most recent birthday. When the initial contact person was not the appropriate respondent, ten or more call-backs were made in an effort to obtain a completed interview. The respondent was provided with a brief description of the interview purpose, identity of the study sponsor, and informed that their participation was voluntary and confidential (see Appendix A for questionnaire).

Table 1 shows the distribution of final telephone call dispositions (see Appendix B for definitions of dispositions). The response rate (RR4; American Association for Public Opinion Research, 1998)² was 36.7%, with a cooperation rate (COOP3; American Association for Public Opinion Research, 1998) of 72.6%. Essentially, the response rate is the ratio of interviews to eligible numbers dialed, and the cooperation rate is the ratio of interviews to all eligible respondents contacted.

¹Kramer, R. E. & Lutz, G. M. (June, 1998) *Attitudes and Opinions on Iowa's Beverage Container Recycling Law*. Cedar Falls, IA: University of Northern Iowa, Center for Social and Behavioral Research.

²American Association for Public Opinion Research (1998). *Standard definitions: Final dispositions of case codes and outcome rates for RDD telephone surveys and in-person household surveys*. Ann Arbor, Michigan: AAPOR.

Table 1
Final Telephone Call Dispositions

Disposition	Frequency	%
Completed Interviews	830	20.6
Refusals & incomplete interviews	314	7.8
Non-eligible number	477	11.8
10+ Attempts, All No Answer	568	14.1
10+ Call Backs	167	4.1
10+ Attempts, All Answering Machine	435	10.8
Respondent Unable to Communicate	76	1.9
No eligible respondent during interview period	69	1.7
Non-working numbers	1,102	27.3
Total Numbers Dialed	4,038	100.0

Statistical & Measurement Issues

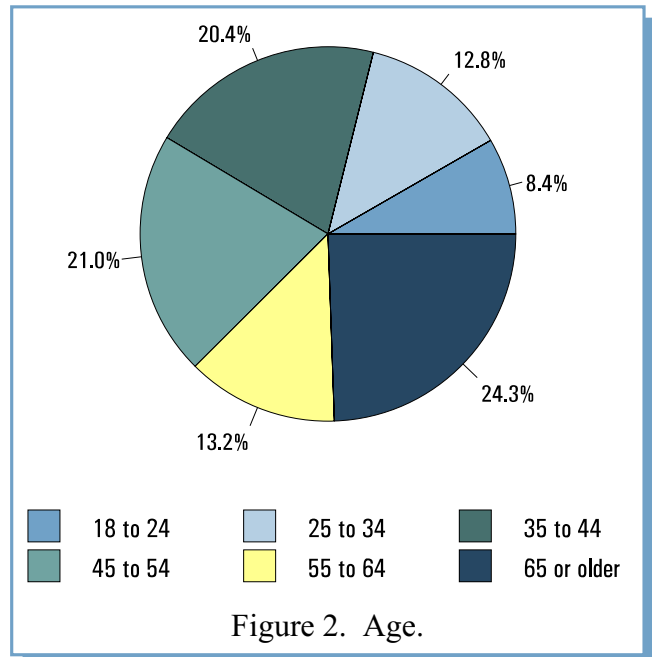
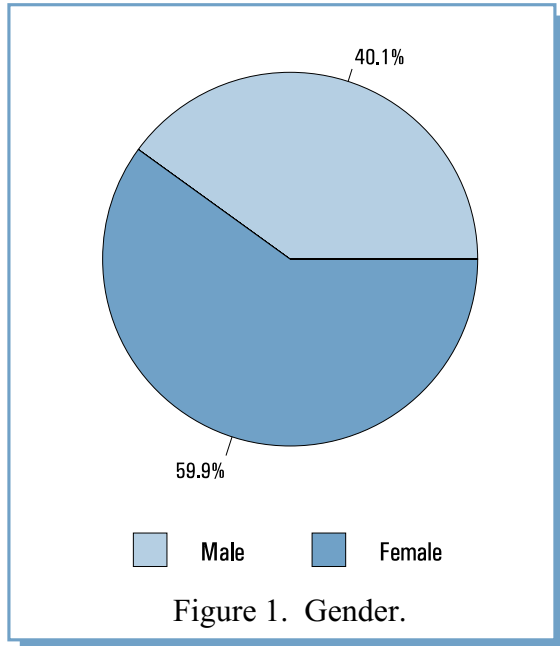
For analyses based on the entire sample, the approximate maximum sampling error at the 95% confidence level is $\pm 3.5\%$. References to significant sub-group differences are based on the results of appropriate inferential statistical tests (e.g., chi square, ANOVA, t-test) using the standard 95% confidence level. Unless otherwise noted, the percentages presented in this report are valid percentages. That is, persons who reported that they “did not know” or who refused to answer an item were excluded from the denominator. Unless we address the valid percentage issue specifically in the text, the reader can assume that fewer than 10% of the respondents were excluded from the denominator.

Many of the items in the present survey were also contained in the similar 1998 survey. However, the exact wording, response format, or both were different for some items. Typically, these improvements were made to provide a greater level of correspondence between the item and the information of interest to decision-makers, to provide increased measurement precision, or for other methodological reasons. Data from the 1998 survey are presented for descriptive purposes only; that is, comparisons of the 1998 and 2000 data do not reflect the results of inferential statistical tests.

This report presents the results of a few items that required the respondents to anticipate their future behavior within particular contexts. For example, respondents were asked how they would dispose of empty beverage containers if there were no longer a refundable deposit system. Although behavioral intentions can be predictive of future behavior, these measures are not perfect predictors. Therefore, the results for these items should be interpreted only as estimates of potential behaviors.

Description of the Sample

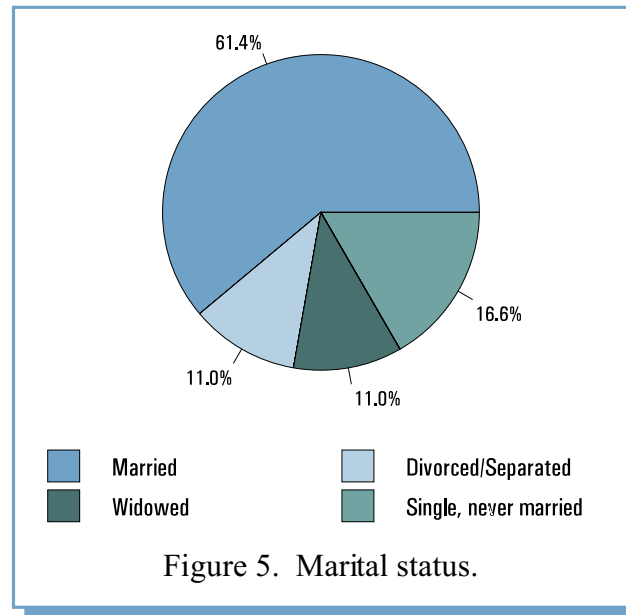
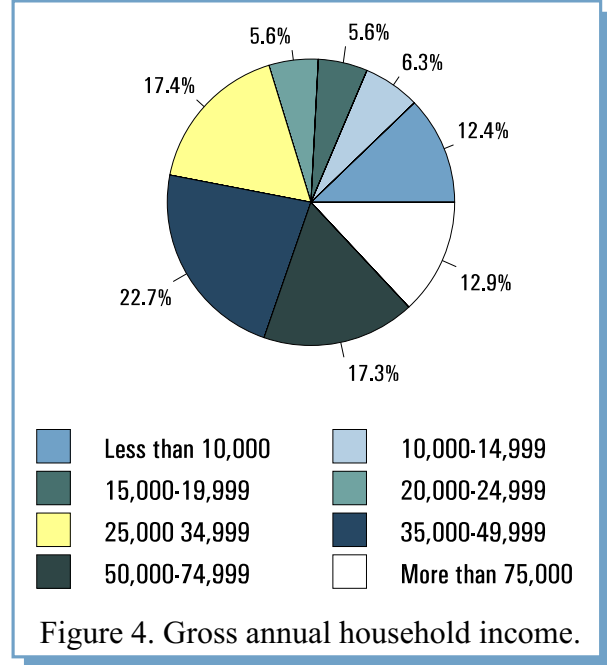
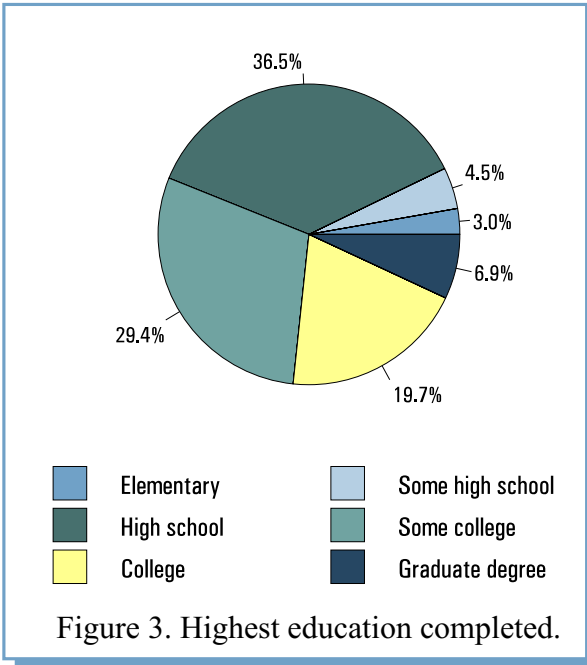
Of the 830 respondents, 40.1% were male and 59.9% were female (see Figure 1). The mean age of the respondents was 49.71 years. As shown in Figure 2, slightly more than one-fifth (21.2%) of the respondents were under the age of 35, and one-fourth (24.3%) were age 65 or older. Less than two percent (1.9%) of the respondents reported that they were of Hispanic, Latino, or Spanish origin. The vast majority (95.3%) of the respondents were White.



The highest level of education respondents reported completing is shown in Figure 3. More than one-third (36.5%) had received a high school diploma or GED, but had not completed any college or technical school. Nearly one-fifth (26.6%) of those surveyed were college graduates.

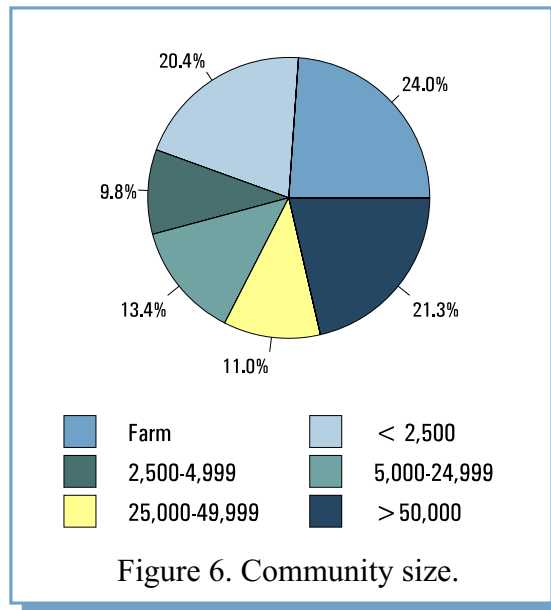
With respect to income, about one-half of the respondents reported an annual gross household income of at least \$35,000 (see Figure 4). In total, 17.6% of all the respondents reported that they “did not know” or refused to provide household income information. These individuals were excluded from Figure 4.

Most (61.4%) of respondents were currently married, whereas 10.2% had never been married (see Figure 5). Of those who were not currently married, 14.0% reported that they currently were living with a partner.

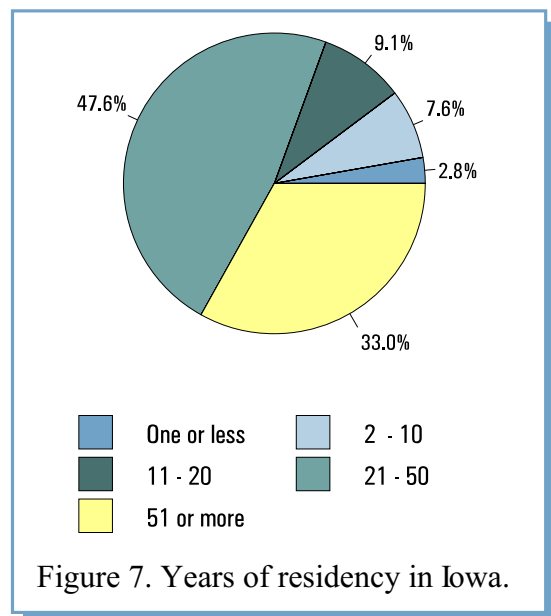


The majority of the respondents (62.4%) reported living in households without children. Thus, approximately one-third of the respondents reported living in households with at least one child. Specifically, 14.6% reported living in a household with at least one child, 13.4% reported living in a household with two children, and 9.5% reported living in a household with three or more children.

Slightly more than one-half (54.2%) of the respondents lived in rural areas including farms and towns of less than 5,000 people. More than one-fifth (21.3%) of the respondents reported living in metropolitan areas of 50,000 or more people (see Figure 6).



Most of those surveyed were long-time Iowa residents (see Figure 7). One-third (33.0%) reported living in the state for 51 years or more, and an additional 47.6% reported living in Iowa between 21 and 50 years. The average length of residency was 41.2 years.



Main Findings

Redeemable Beverage Containers

Household Behavior. Nearly all respondents (97.3%) reported that they or a household member had at least once returned an empty beverage container to a store or redemption center to have the deposit refunded. Respondents who reported that they or someone in their household has ever returned a redeemable beverage container to have the deposit refunded were asked the *main* reason that the container or containers were returned. **The majority (51.7%) of the respondents reported that the main reason someone from their household returned these containers was to receive the deposit refund.** Reducing clutter and protecting the environment were mentioned as main reasons by 21.6% and 19.7% of the respondents, respectively.

Main reasons for redeeming empty beverage containers:

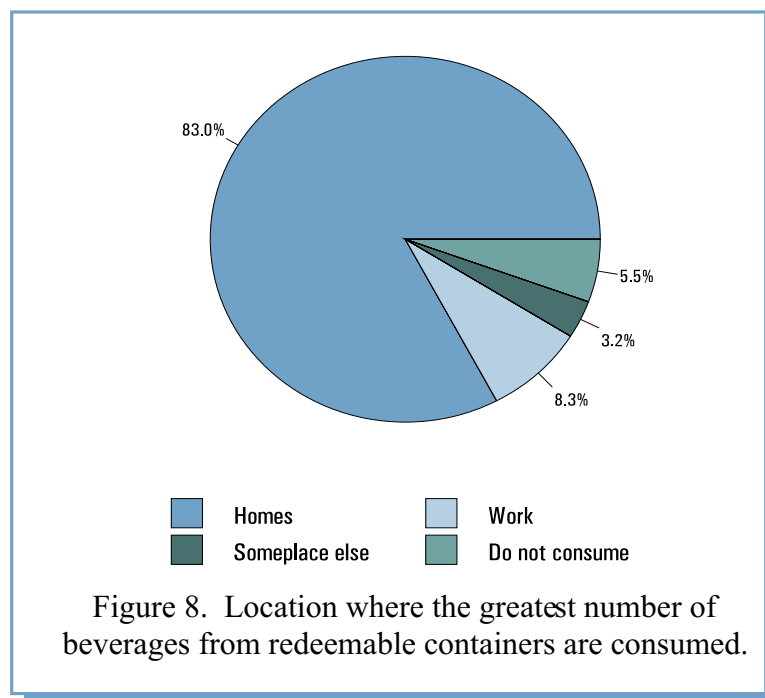
- ▶ receive the refund (51.7%)
- ▶ reduce clutter by getting rid of them (21.6%)
- ▶ protect the environment (19.7%)
- ▶ receive the refund, reduce clutter, and protect the environment were equally important (5.4%)
- ▶ receive the refund and protect the environment were equally important (0.9%)
- ▶ receive the refund and reduce clutter were equally important (0.3%)
- ▶ something else (0.5%)

Less than three percent (2.7%, $n = 22$) of the respondents reported that no household member had ever returned a redeemable beverage container to have the deposit refunded. Respondents reported that the main reasons no household member had ever returned the containers are listed below. The reader should note that the percentages displayed are not the percentage of *all* respondents, but rather are the percentage of only the 22 respondents in households that have never returned containers to have the deposits refunded. Because of the small sample size for this sub-group, the point estimates associated with each of these reasons may be unreliable.

The main reasons households do not return empty redeemable beverage containers for a refund were:

- ▶ returning inconvenience (28.6%)
- ▶ household does not buy beverages in these types of containers (19.0%)
- ▶ give to charity (19.0%)
- ▶ recycle (14.3%)
- ▶ something else (14.3%)
- ▶ no reason (4.8%)

Consumption. Less than six percent (5.8%) of all those surveyed reported that they do not consume beverages purchased in redeemable containers (see Figure 8). **Typically beverages from redeemable containers are consumed in private homes (see Figure 8).**

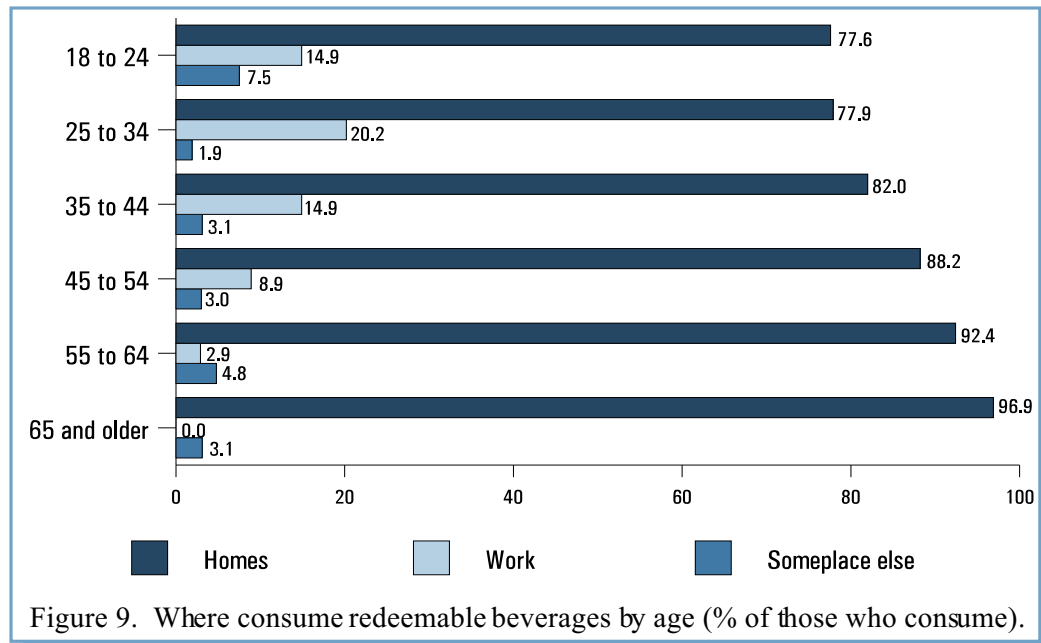


Women and persons with household incomes of less than \$35,000 were five times more likely than men and persons with higher household incomes to report that they do not drink beverages in redeemable containers (see Table 2). More importantly, 18.1% of those aged 65 or older reported that they do not drink soda or beer from redeemable containers. The reader should note that even among these sub-groups, more than 80% of those surveyed reported drinking beverages from redeemable containers (see Table 2).

Table 2
Location Where the Greatest Number of Beverages
from Redeemable Containers are Consumed
(% Within Demographic Group)

	Home	Work	Someplace else	Do not consume
Gender				
Male	83.3	11.2	3.9	1.5
Female	81.0	7.3	3.0	8.7
Age Group				
18-24	77.6	14.9	7.5	0.0
25-34	77.1	20.0	1.9	1.0
35-44	80.0	14.5	3.0	2.4
45-54	86.6	8.7	2.9	1.7
55-64	90.7	2.8	4.7	1.9
65 and older	79.4	0.0	2.5	18.1
Community Type				
Rural	82.3	7.5	3.9	6.3
Urban	81.8	10.6	2.4	5.1
Income				
< \$35,000	77.8	8.8	3.4	10.0
\$35,000+	83.6	11.1	3.3	1.9

There were significant differences in consumption patterns based on gender, age group, and income. However, with the exception of age group, these differences were attributable to the different percentages of persons who do not drink beverages from these types of containers. For example, among those who reported that they consume these types of beverages, the only significant difference in the location of consumption was based on age group (see Figure 9).



Disposal Practices. All of the respondents, even those who reported that they do not drink beverages from redeemable containers, were asked what they usually do with such containers. The basis for asking all respondents this line of questioning was that people who do not consume the beverages which come in such containers may still possess and handle them (e.g., other household members use). **The majority of the respondents (86.8%) reported *they usually return redeemable beverage containers to have the deposits refunded* (see Figure 10).** Less than 3% of the respondents live in households that do not purchase or consume beverages in redeemable containers.

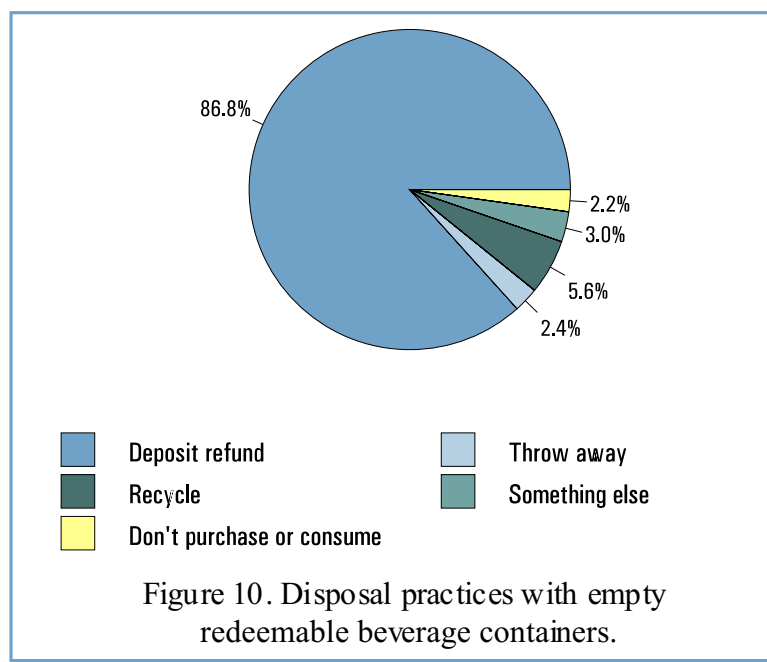


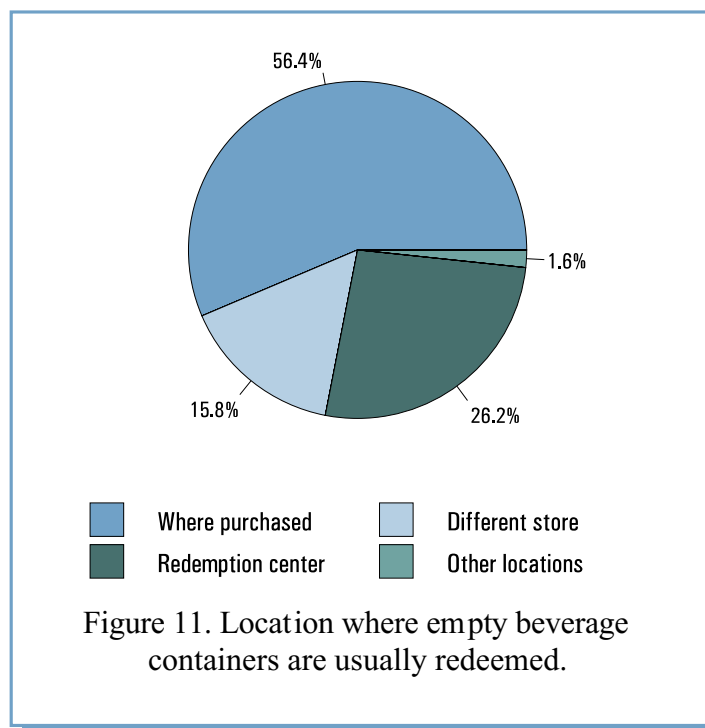
Table 3 excludes those respondents who reported that they do not possess or handle empty redeemable beverage containers (i.e., no member of household purchases or consumes them). There were no statistical differences based on gender, community type, or household income. The only statistically significant differences with respect to participants usual disposal practices were based on age (see Table 3). Generally, the likelihood of recycling these containers without receiving the refundable deposit decreased with age (see the oldest adults for the exception). The apparent differences among the percentages of persons from different age group who usually either throw the containers in the trash or do “something else” with them may be unreliable due to the small numbers of such respondents.

Table 3
What Usually do with Empty Redeemable Beverage Containers
(% of Those Handling These Containers)

	Refund	Throw away	Recycle	Something else
Gender				
Male	87.6	3.3	7.3	1.8
Female	89.8	1.9	4.6	3.8
Age Group				
18-24	82.6	5.8	11.6	0.0
25-34	83.5	3.9	8.7	3.9
35-44	86.7	4.8	4.2	4.2
45-54	92.4	0.6	4.1	2.9
55-64	95.4	0.0	2.8	1.9
65 and older	89.2	1.1	6.5	3.2
Community Type				
Rural	90.0	1.9	5.3	2.8
Urban	87.4	3.3	6.3	3.0
Income				
< \$35,000	85.6	2.9	8.0	3.5
\$35,000+	91.0	2.2	4.2	2.5

Note. The number of respondents who reported “something else” was 24.

The locations where people usually redeem their empty beverage containers are shown in Figure 11. More than one-half (56.4%) of the respondents reported that they usually return the containers to the store where the beverages were purchased. Twenty-six percent (26.2%) of the respondents reported that they usually return the containers to redemption centers, and 15.8% reported that they usually return them to a store other than where the beverages were purchased. Only 1.6% of the respondents take the containers to some other location. **In sum, 72.2% of the respondents usually redeem their empty beverage containers at a store.**

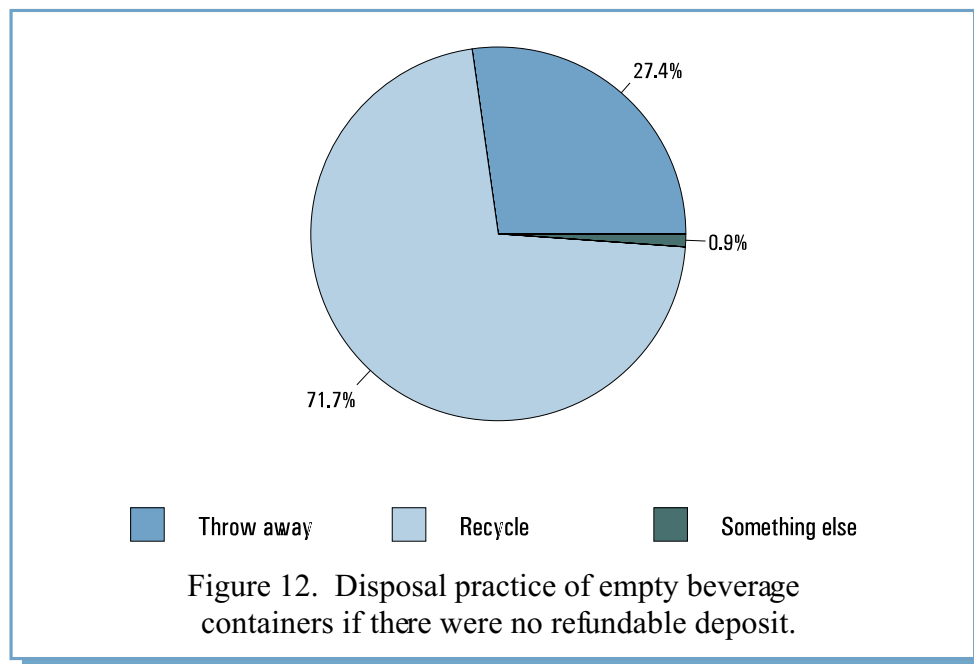


The locations where empty redeemable beverage containers were usually returned varied by age group and community type. Respondents aged 55 or older were more likely than younger respondents to report that they usually return empty redeemable containers to the store where the containers were purchased (see Table 4). **Respondents living in rural areas were twice as likely as those living in urban communities to redeem the containers at redemption centers.**

Table 4
Where Usually Redeem Beverage Containers
(% Within Demographic Group)

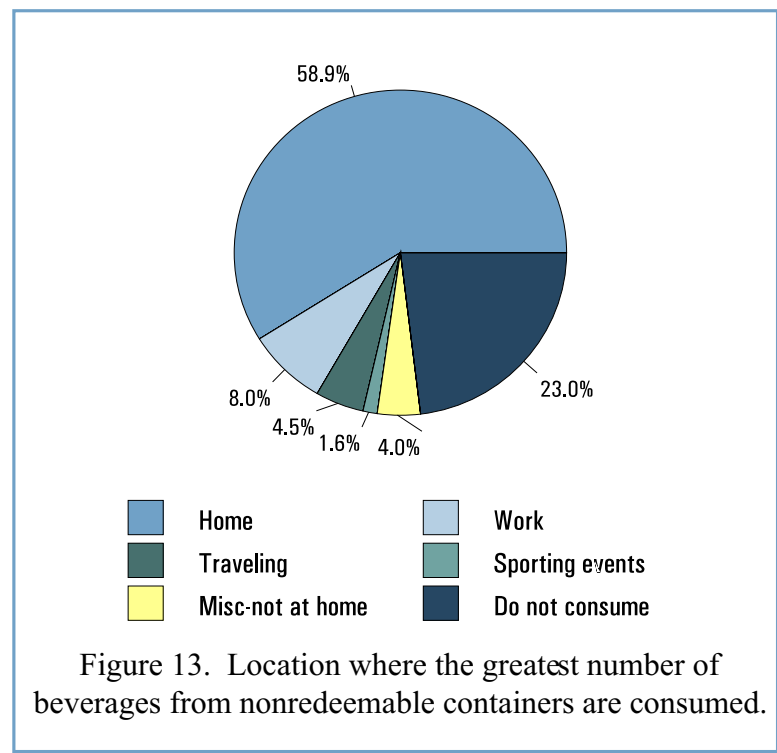
	Where purchased	Different store	Redemption center	Other locations
Gender				
Male	56.0	16.2	26.8	1.1
Female	56.7	15.5	25.9	1.9
Age Group				
18-24	49.1	19.3	31.6	0.0
25-34	47.6	15.5	35.7	1.2
35-44	54.3	15.7	27.9	2.1
45-54	46.5	22.6	30.3	0.6
55-64	63.4	11.9	22.8	2.0
65 and older	69.3	11.0	17.2	2.5
Community Type				
Rural	51.2	13.1	33.9	1.8
Urban	63.1	18.8	16.9	1.3
Income				
< \$35,000	56.1	15.2	26.1	2.7
\$35,000+	57.4	17.0	24.6	0.9

Behavioral Intentions. The majority (71.7%) of those who handle redeemable beverage containers reported that they would recycle empty beverage containers even if a refundable deposit system did not exist. Yet, more than one-fourth (27.4%) reported that they would throw the containers away (see Figure 12). There were no significant differences in this behavioral intention based on gender, age group, community type, or household income.



Nonredeemable Beverage Containers

Consumption. More than three-fourths of the respondents reported that they drink beverages such as teas, sports drinks, juices, and bottled water that come in nonredeemable containers (see Figure 13). **The majority (58.9%) of those surveyed reported that they drink the greatest number of these beverages from nonredeemable containers at their own or other people's homes.** One in ten of the respondents reported that they consumed the greatest number of these beverages at places other than in homes or at work. These other types of places included at sporting events or while traveling.

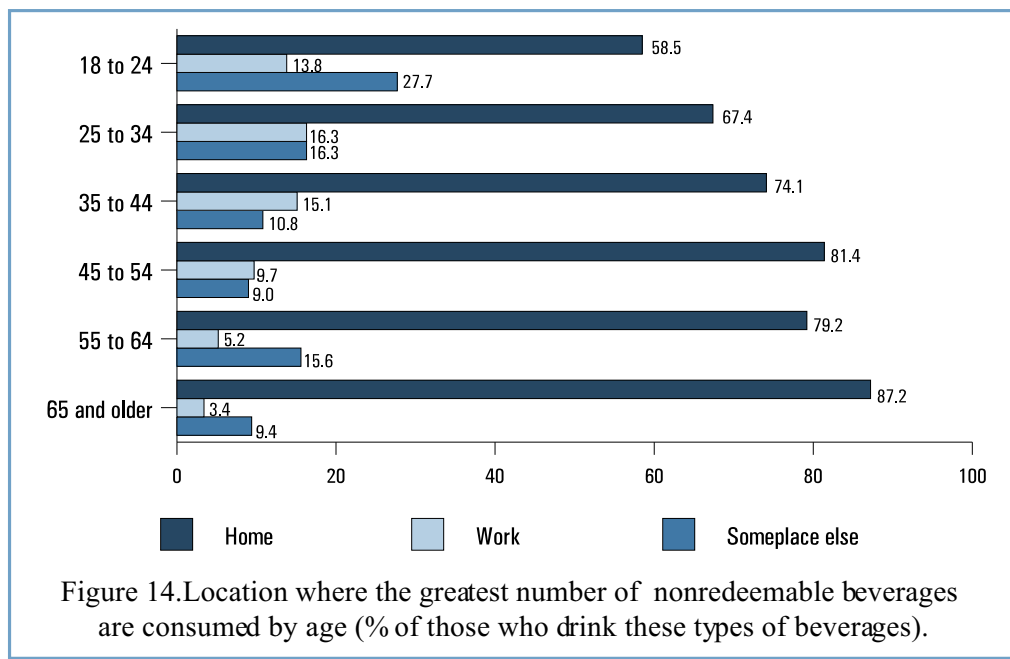


Older respondents and respondents with household incomes of less than \$35,000 were the least likely to report drinking beverages that come in nonredeemable containers at home or someone else's home (see Table 5). More than one-fourth (26.1%) of the youngest adults reported that they drink the greatest number of beverages in nonredeemable containers someplace other than in homes or workplaces.

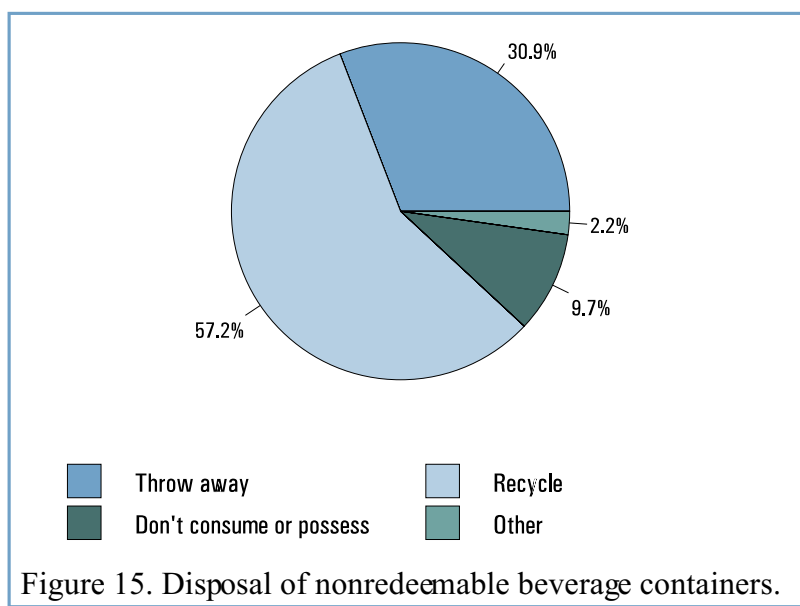
Table 5
Location Where the Greatest Number of Beverages
from Nonredeemable Containers are Consumed
(% Within Demographic Group)

	Home	Work	Someplace else	Do not consume
Gender				
Male	61.2	8.8	9.4	20.6
Female	57.4	7.5	10.5	24.5
Age Group				
18-24	55.1	13.0	26.1	5.8
25-34	55.8	13.5	13.5	17.3
35-44	62.0	12.7	9.0	16.3
45-54	68.6	8.1	7.6	15.7
55-64	58.1	3.8	11.4	26.7
65 and older	51.5	2.0	5.6	40.9
Community Type				
Rural	58.3	8.4	10.0	23.2
Urban	61.0	7.6	9.8	21.7
Income				
< \$35,000	54.2	6.3	10.3	29.2
\$35,000+	65.6	11.2	9.8	13.4

After excluding those respondents who do not consume beverages from nonredeemable containers (i.e., column 5 in Table 5), the only statistical differences in location of consumption were based on age group. Younger respondents were more likely than older respondents to report drinking the greatest number of these types of beverages someplace other than in private homes (see Figure 14).



Disposal Practices. The majority (57.2%) of respondents reported that they usually recycle nonredeemable containers, whereas slightly less than one-third (30.9%) of respondents throw away such containers. Fewer than one in ten (9.7%) respondents never consume or possess beverages from these types of containers. It should be noted that this percentage is less than one-half of the previously reported percentage (23.0%) of respondents who report that they do not consume these types of beverages.



Men were more likely than women to throw away nonredeemable beverage containers (40% vs. 30%), and women were more likely than men to recycle these containers (67% vs. 58%; see Table 6). As age group increased, the likelihood of throwing away nonredeemable containers decreased and the likelihood of recycling nonredeemable containers increased. In other words, older respondents were more likely than younger respondents to recycle these types of containers.

Table 6
What Usually Do with Nonredeemable Containers
(% Within the Demographic Group)

	Throw away	Recycle	Other
Gender			
Male	39.7	58.3	2.0
Female	30.4	66.9	2.7
Age Group			
18-24	47.0	48.5	4.5
25-34	43.3	55.7	1.0
35-44	36.4	61.6	2.0
45-54	34.4	63.8	1.9
55-64	27.8	69.1	3.1
65 and older	25.6	71.4	3.0
Community Type			
Rural	36.9	60.1	3.1
Urban	31.1	67.2	1.7
Income			
< \$35,000	38.5	60.5	1.0
\$35,000+	32.0	65.3	2.7

Note. Those who do not handle these types of containers were excluded from this analysis.

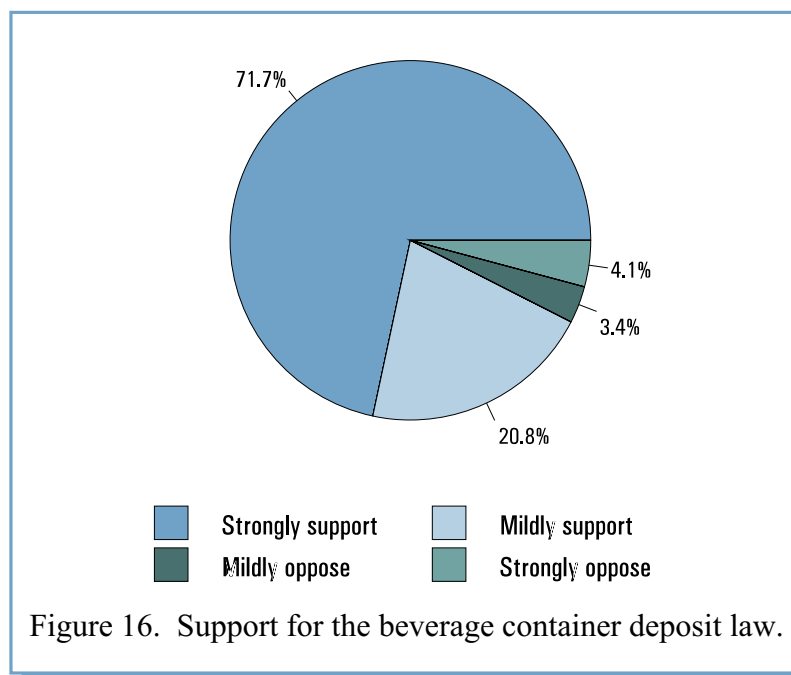
Opinions About the Bottle Bill

Familiarity. Most respondents (97.6%) reported that they were familiar with the beverage container deposit law. The youngest and oldest respondents were less likely to be familiar with the deposit law than were other respondents (see Table 7). Those with a gross annual household income of at least \$35,000 were more likely to be familiar with the beverage container deposit law than were respondents with household incomes of less than \$35,000. Although statistically significant differences in reported familiarity with the beverage container deposit law were observed based on age group and income level, **the vast majority of people in all the groups shown in Table 7 reported being familiar with the law.**

Table 7
Familiarity with Beverage Law

	<i>n</i>	% Familiar
Gender		
Male	326	97.9
Female	484	97.4
Age Group		
18-24	66	95.7
25-34	103	98.1
35-44	164	98.2
45-54	171	99.4
55-64	108	100.0
65 and older	189	95.0
Community Type		
Rural	432	97.7
Urban	365	97.9
Income		
< \$35,000	308	95.4
\$35,000+	360	99.7

Support for the Law. The vast majority (92.5%) of those surveyed supported the beverage container deposit law. Specifically, 71.7% of the respondents strongly supported it, and an additional 20.8% mildly supported it (see Figure 16). Only 7.5% of the adults surveyed opposed the beverage container deposit law.



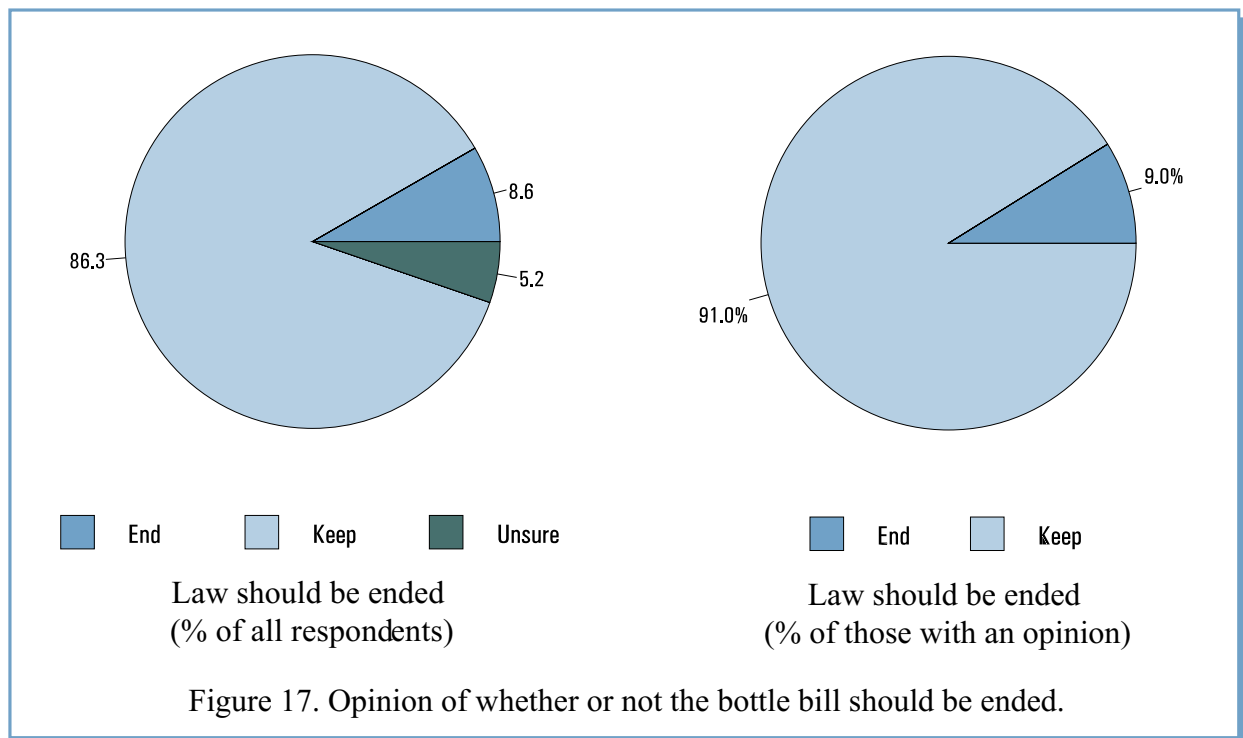
Although only 56.9% of the youngest respondents reported strongly supporting the beverage container deposit law, there were no statistically significant differences in the mean level of support for the law (see Table 8).

Table 8
Support for the Beverage Container Deposit Law
(% Within Demographic Group)

	Mean	Strongly support 1	Mildly support 2	Mildly oppose 3	Strongly oppose 4
Gender					
Male	1.5	67.6	23.6	3.9	4.8
Female	1.4	74.6	18.8	3.0	3.6
Age Group					
18-24	1.5	56.9	35.4	4.6	3.1
25-34	1.5	62.7	30.4	1.0	5.9
35-44	1.5	70.4	18.5	4.9	6.2
45-54	1.4	75.3	15.9	5.9	2.9
55-64	1.3	74.5	21.7	0.9	2.8
65 and older	1.3	79.8	14.9	1.6	3.7
Community Type					
Rural	1.4	73.1	20.6	3.2	3.0
Urban	1.4	69.7	21.0	3.6	5.6
Income					
< \$35,000	1.4	73.3	20.9	2.3	3.5
\$35,000+	1.4	71.8	17.8	5.1	5.4

Note. Agreement ratings on a 4-point scale with lower scores indicating greater support.

Only 8.6% of all adults surveyed reported that the beverage container deposit law should be ended, whereas 86.3% reported that the law should be kept. One in twenty (5.2%) of the respondents were unsure whether the law should be kept or ended. Figure 17 also shows the percentages of *those with an opinion* who favored ending versus continuing the law. There were no statistical differences in support for the law within the demographic subgroups of gender, age, community type, and household income.



Reasons to End the Law. Those respondents (8.6%, $n = 71$) who reported the deposit law should be discontinued were asked several questions regarding why they thought the law should be ended. More than one-half of these respondents reported that the law should be ended because —

- ▶ the consumer has to return containers to a store or redemption center (71.0%)
- ▶ the consumer has to store empty containers (60.0%)
- ▶ the consumer has to pay the refundable deposit (56.5%)
- ▶ of the availability of curbside recycling (54.5%)
- ▶ of the availability of drop-off recycling centers (50.0%)

Twenty-five of these seventy-one respondents indicated some other reasons for discontinuing the deposit law. These reasons included money-related issues, the inconveniences of storing and returning bottles, recycle-related issues, and other miscellaneous reasons (see Appendix D, Q13).

Reasons to Keep the Law. Those respondents who reported that the beverage container deposit law should be kept were asked several questions regarding why they thought this. More than 95% of these respondents reported that the law should be kept for each of the following reason —

- ▶ **reduces litter in general (98.7%)**
- ▶ **reduces litter along roadways (97.9%)**
- ▶ **decreases the amount of material added to landfills (97.2%)**
- ▶ **encourages recycling (96.3%)**

Table 9 shows the percentage the respondents by demographic subgroups who reported the law should be kept for each reason. Respondents with household incomes of more than \$35,000 were statistically less likely to report that the law should be kept because it reduces litter in general. Respondents living in urban communities were statistically less likely to report that the law should be kept because it encourages recycling. Respondents aged 18 through 24 were statistically less likely to report that the law should be kept because it reduces litter along the roadways and also because it decreases the amount of material added to landfills. Although there were several statistically significant differences, the general conclusion is that there is a high level of agreement among respondents that the factors assessed were reasons the law should be continued.

Table 9
Reasons for Keeping the Deposit Law
(% With Demographic Group Endorsing Statement)

	Gender		Age Group						Community Type		Income	
	M	F	18-24	25-34	35-44	45-54	55-64	65 and older	Rural	Urban	< \$35,000	\$35,000+
Reduce litter in general	98.3	99.1	96.4	100.0	97.9	98.6	99.0	99.4	98.2	99.4	99.6	97.7
Reduces litter along roadways	96.1	97.9	87.7	96.6	97.9	98.6	99.0	97.6	97.3	97.8	96.7	97.7
Encourages recycling	95.8	96.7	94.7	96.7	97.9	93.9	95.7	97.6	97.9	94.7	97.1	95.8
Decreases the amount of material added to landfills	97.9	97.9	89.5	100.0	97.9	97.9	99.0	98.8	97.9	98.1	97.5	98.4

Note. Persons who did not believe the law should be kept were not asked this series of questions.

Fewer than one in ten respondents (7.3%, $n = 61$) who did not favor ending the law reported some other advantages for keeping the beverage container deposit law. Many of these miscellaneous responses concerned financial or environmental issues. These responses can be found in Appendix D (Q15).

The previous section reported the reasons for ending the law according to those who reported it should be ended, and the reasons for keeping the law according to those who reported the law should not be ended. The next section of the report presents several attitudinal measures asked of *all* respondents.³

Agreement with Attitudinal Statements. Respondents rated their level of agreement or disagreement with nine attitudinal statements about the beverage container deposit law. The majority of respondents either *agreed* or *strongly agreed* with each of the statements, except for the statements regarding sanitation, inconvenience of returning containers, and inconvenience of storing containers (see Table 10). More than 80% of the adults surveyed reported that (1) there is less litter in Iowa's public places because of the law and (2) recycling bottles and cans uses less energy than manufacturing new ones. The majority of the respondents disagreed that storing and returning empty beverage containers was an inconvenience for them. Lower mean scores indicate greater levels of agreement with the statement.

Table 10
Beverage Container Deposit Law Attitudinal Statements

Attitudinal Statements	Mean	Strongly agree 1	Agree 2	Uncertain 3	Disagree 4	Strongly disagree 5
Because of the beverage container deposit law, there is less litter in Iowa's public places such as parks and along roadways	1.8	34.7	53.7	3.7	6.7	1.1
By recycling bottles and cans we use less energy and materials manufacturing new bottles and cans	2.0	22.1	60.0	14.2	3.3	0.5
The beverage container deposit law provides economic benefits for Iowa, such as additional employment opportunities	2.2	10.5	63.4	17.7	7.5	1.0
While I am at the store to redeem beverage containers, I often make a purchase	2.2	15.6	62.2	3.2	8.2	0.8
Having to return beverage containers to get my deposit refunded has improved my attitudes about recycling	2.4	9.8	58.4	11.5	18.6	1.6
Having to return beverage containers to get my deposit refunded has increased the amount of other materials that I recycle	2.8	6.6	46.6	8.9	36.2	1.7
It is unsanitary or unhealthy to handle and store empty beverage containers	3.0	5.5	35.9	13.6	41.3	3.6
Returning empty containers to a store or redemption center to receive the deposit refund is an inconvenience for me	3.4	4.0	26.0	2.5	61.7	5.8
Storing empty redeemable beverage containers is an inconvenience for me	3.4	2.7	27.3	3.1	61.3	5.6

Note. Agreement ratings on a 5-point response scale with lower scores indicating greater agreement.

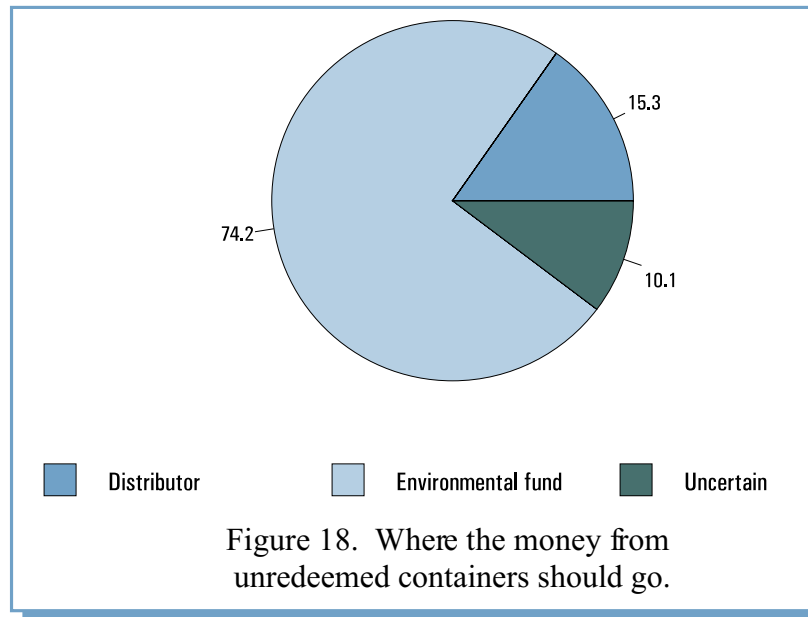
³ Respondents who reported that no one in their household had ever returned a beverage container to receive the refundable deposit were not asked their level of agreement with the following statements: making additional purchases at store while redeeming containers, returning for deposit is inconvenient, returning containers to receive deposit has improved attitudes about recycling, or returning containers for deposit has increased recycling of other materials.

There were several statistically significant differences among demographic subgroups in terms of their agreement with the attitudinal statements. Recall that lower mean scores indicate higher levels of agreement. In other words, *higher* mean scores correspond to *lower* levels of agreement with the statement.

- ▶ Litter in Iowa's public places
 - ▶ Respondents 18 through 24-years-old expressed *lower* levels of agreement with the contention that the bottle bill decreases litter in Iowa's public places than did respondents aged 25 through 64 years of age (see Appendix C for more detail).
 - ▶ Respondents with a household income at least \$35,000 agreed *more* strongly ($M = 1.8$) that there is less litter in general because of the deposit law than did respondents with household incomes of less than \$35,000 ($M = 1.9$).
- ▶ Energy use
 - ▶ Respondents aged 45 through 54 agreed *more* strongly that recycling containers is energy efficient than did those aged 65 or older ($M = 1.8$ vs. $M = 2.2$). There were no differences among the other age groups.
- ▶ Economic benefits
 - ▶ Respondents with household incomes of less than \$35,000 agreed *more* strongly than did those with higher household incomes that the bottle bill provides economic benefits for Iowa ($M = 2.1$ vs. $M = 2.3$).
- ▶ Storage
 - ▶ Men were *more* likely than women to agree that storing empty containers is inconvenient ($M = 3.3$ vs. $M = 3.5$).
 - ▶ Respondents 35 through 44 years old agreed *more* strongly than did respondents aged 65 or older that storing empty containers is an inconvenience to them ($M = 3.2$ vs. $M = 3.6$). There were no differences among the other age groups.
 - ▶ Respondents with a household income at least \$35,000 agreed *more* strongly ($M = 3.3$) that storing empty containers is inconvenient than did respondents with household incomes of less than \$35,000 ($M = 3.5$).
- ▶ Returning
 - ▶ Men were *more* likely than women to agree that returning empty containers is inconvenient ($M = 3.2$ vs. $M = 3.5$).
 - ▶ Respondents 35 through 44 years old agreed *more* strongly than did respondents aged 65 or older that returning empty containers is inconvenient ($M = 3.2$ vs. $M = 3.6$). There were no significant differences among the other age groups.
 - ▶ Respondents with household incomes of at least \$35,000 agreed *more* strongly ($M = 3.3$) that returning empty containers is inconvenient than did respondents with household incomes of less than \$35,000 ($M = 3.5$).

- ▶ Recycling Attitude
 - ▶ Respondents 35 through 44 years old agreed *less* strongly than did those aged 25 through 34 or those aged 55 or older that returning beverage containers to receive the refundable deposit improved their attitudes about recycling (see Appendix C for details).
 - ▶ Respondents with household incomes of at least \$35,000 agreed *less* strongly ($M = 2.5$) that returning beverage containers for the deposit refund improved their attitudes of recycling than did respondents with household incomes of less than \$35,000 ($M = 2.3$).
 - ▶ Respondents from rural communities agreed *more* strongly than did those from urban communities that returning beverage containers for the deposit refund improved their attitudes of recycling ($M = 2.4$ vs. $M = 2.5$).
- ▶ Make Purchases
 - ▶ Respondents from urban communities agreed *more* strongly than did those from rural communities that they make purchases while returning beverage containers to receive the deposit refund ($M = 2.3$ vs. $M = 2.4$). This is consistent with the finding that persons in rural communities were more likely than those in urban communities to return their empty beverage containers to redemption centers.

Unredeemed Containers. Currently, money from unredeemed containers (i.e., when the consumers do not return the container to have the deposit refunded) is retained by the beverage distributors. Respondents were asked whether such monies should be kept by the beverage distributors or placed in a fund for recycling and environmental programs (see Figure 18). Respondents were not provided with information regarding whether this fund would be managed by a governmental agency or by a private organization. **Three out of four adults surveyed (74.2%) reported that the money from unredeemed containers should be put into a fund for recycling and environmental programs.** The beverage distributors should keep the money according to 15.3% of the respondents. One in ten (10.1%) of those surveyed reported that they “did not know” what should happen with money.

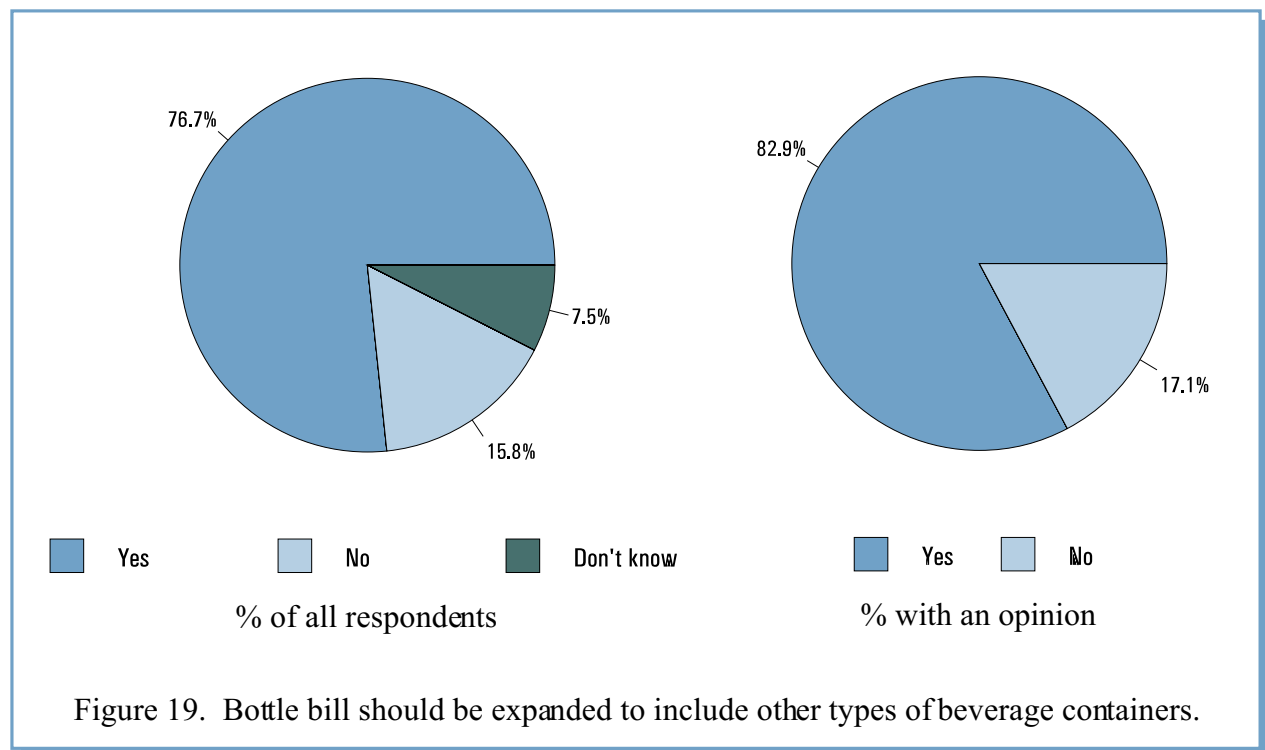


There was substantially more support for unredeemed deposit money to be put in a fund for recycling and environmental programs than for the money to be retained by the beverage distributors; this was evident regardless of the respondent's gender, age, type of community residence, or household income level (see Table 11). Women were statistically more likely to support the environmental fund than were men. Support for the environmental fund was stronger among younger than older respondents. One-fourth (25.8%) of those aged 55 through 64 and 22.0% of those aged 65 or older reported that the beverage distributors should retain the money from unredeemed beverage containers.

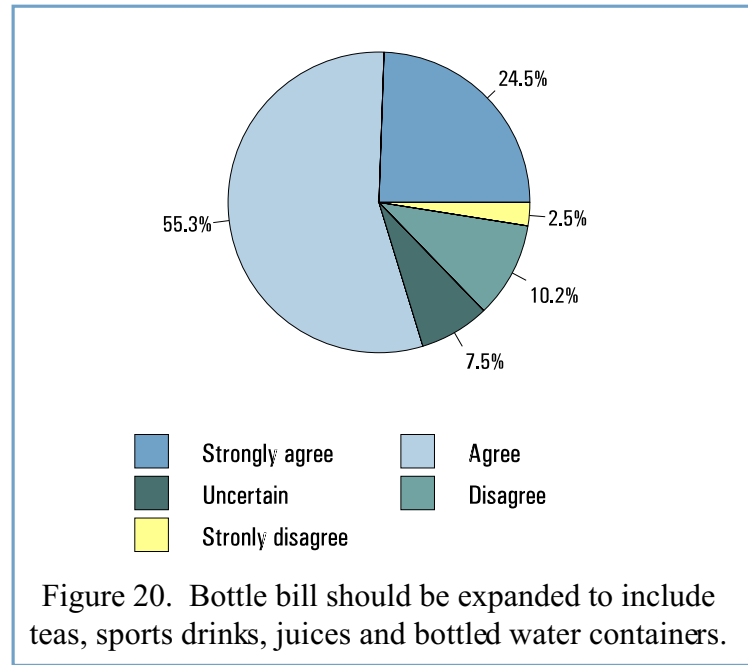
Table 11
Unredeemed Container Money (% Within Demographic Group)

	Gender		Age Group						Community Type		Income	
	Male	Female	18-34	25-34	35-44	45-54	55-64	65 +	Rural	Urban	< \$35,000	\$35,000+
Deposits kept by the beverage distributors	21.7	13.9	9.0	8.4	16.1	15.1	25.8	22.0	16.9	16.9	16.4	16.8
Fund for recycling and environmental programs	78.3	86.1	91.0	91.6	83.9	84.9	74.2	78.0	83.1	83.1	83.6	83.2

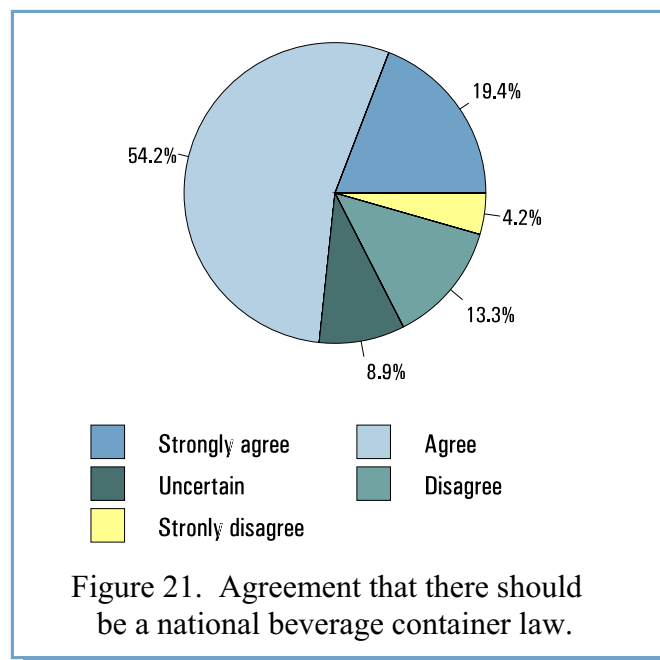
Expansion of the Bottle Bill. The opinions of adult Iowans regarding whether or not the bottle bill should be expanded to include containers for beverages such as teas, sports, drinks, juices, and bottled water were assessed using two different items. The first item was forced choice concerning whether or not the bill should be expanded (see Figure 19), and the second item was a 5-point scale assessing the strength of agreement with expanding the law. **Expanding the bottle bill to include adding a refundable deposit to containers for beverages such as such as teas, sports drinks, juices, and bottled water was supported by 82.9% of those with an opinion.** The 7.5% of the respondents who reported that they “did not know” whether or not the law should be expanded are excluded from Figure 19. There were no statistically significant sub-group differences for this item.



Nearly 80% of the respondents reported that they agreed or strongly agreed that the beverage container deposit law should be expanded to include other types of beverage containers (see Figure 20). There was greater agreement from men ($M = 2.0$) than from women ($M = 2.2$) that expanded the law to include other types of beverage containers; lower means scores correspond to higher levels of agreement. There were no differences for expanding the bottle bill based on age group, community type, or household income.



Currently, consumers in some other states do not pay a refundable deposit on soda and beer containers. **Nearly three-fourths (73.6%) of those surveyed were in favor of a national beverage container law (see Figure 21).**



Community Recycling Programs

Attitudinal Measures. Respondents were asked a series of attitudinal questions regarding recycling (see Table 12). **The vast majority (88.8%) of these respondents agreed or strongly agreed that a combination of the deposit law and curbside recycling was the best way to decrease the amount of material going into landfills.** There was greater agreement by women ($M = 1.9$) than by men ($M = 2.0$) that this combination was the best way to decrease the material going into landfills.

Slightly less than one-half (47.7%) of the respondents agreed or strongly agreed that people would continue to recycle beverage containers if the deposit law was ended. Respondents aged 25 through 34 expressed lower levels of agreement ($M = 3.1$) with this item than did respondents aged 65 or older ($M = 2.7$). There were no other differences in agreement among the other age groups.

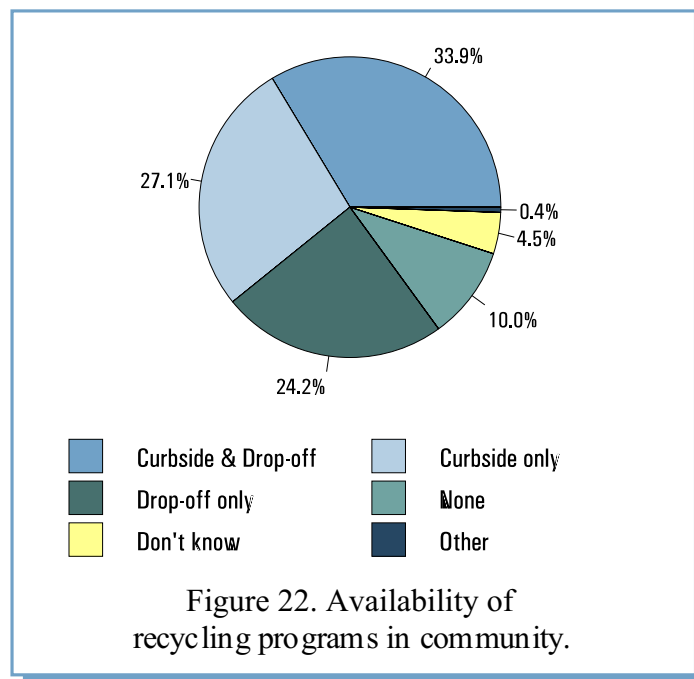
One-third (33.7%) of the respondents reported that storing materials such as paper, plastic, glass, and metal for recycling was an inconvenience for them. There was greater agreement by men ($M = 3.2$) than by women ($M = 3.4$) that storing materials was an inconvenience.

Table 12
Recycling Attitudinal Statements

Recycling Attitudinal Statements	Mean	Strongly agree 1	Agree 2	Uncertain 3	Disagree 4	Strongly disagree 5
A combination beverage container deposit law and curbside recycling program is the best way to decrease the amount of material going into landfills	1.9	24.0	64.8	6.3	4.6	0.4
If the beverage container deposit law was ended, most people would continue to recycle beverage containers by using curbside recycling if it was available	2.9	5.4	42.3	13.1	32.7	6.5
Storing materials such as paper, plastic, glass and metal for recycling is an inconvenience for me	3.3	4.3	29.6	4.1	53.9	8.1

Note. Lower mean scores represent higher levels of agreement.

Program Availability. The types of programs available to respondents in their communities are shown in Figure 22. **Eighty-five percent of the respondents reported that they were aware of some type of recycling program in their communities.** In fact, one-third of those surveyed reported that their communities had both curbside and drop-off programs.



The types of programming available to respondents varied statistically by the size of the communities (see Table 13). Specifically, one-half of the respondents in urban communities reported that they were aware of both curbside and drop-off recycling programs where they live, whereas only 21.9% of those in rural communities reporting having both types of programs available. Respondents from rural communities were more likely than respondents from urban communities to have only a drop-off recycling program in the community (31.1% vs. 18.5%). There were no statistical differences observed based on household income.

Table 13
Types of Recycling Programs in Community
(% Within Demographic Group)

Type of Recycling	Curbside only	Drop off only	Curbside and drop off	Community does not have program	Other
Community Type					
Rural	29.5	31.1	21.9	0.5	17.0
Urban	27.5	18.5	50.8	0.3	2.8
Income					
< \$35,000	25.7	28.3	35.2	0.7	10.2
\$35,000+	30.1	20.5	38.9	0.3	10.2

Use of Curbside Recycling. More than three-fourths (78.3%) of the respondents living in communities with curbside recycling programs reported that someone in their household uses such a program. Among those with a curbside recycling program available in their community, there were several statistically significant subgroup differences. The youngest respondents were the least likely to report that they or someone in their household uses a curbside recycling program (see Table 14). Respondents from rural communities were less likely than their urban counterparts to report that their household uses a curbside recycling program. Likewise, those in households with incomes of less than \$35,000 were less likely than their higher income counterparts to report that their household uses a curbside recycling program.

Table 14
Use Curbside Recycling
(% With Demographic Group)

Curbside Recycling	<i>n</i>	% household uses program
Gender		
Male	169	77.9
Female	224	78.6
Age Group		
18-24	22	56.4
25-34	53	70.7
35-44	86	83.5
45-54	85	81.0
55-64	55	82.1
65 and older	86	81.9
Community Type		
Rural	160	73.4
Urban	226	82.2
Income		
< \$35,000	127	69.4
\$35,000+	200	83.0

The two most commonly mentioned reasons respondents reported that their household does not participate in curbside recycling were that they were unable to participate due to the location of their residence (e.g., in the country, apartment complex) and that storing and sorting of materials is inconvenient. Other reasons included costs to the household, too few pick-up dates, and other miscellaneous responses (see Appendix D, Q21B1).

Use of Drop-off Recycling. Slightly more than three-fourths (76.3%) of those living in communities with drop-off recycling programs reported that they or someone else in their household uses these programs. Respondents in rural communities were more likely than those in urban communities to use drop-off programs (see Table 15).

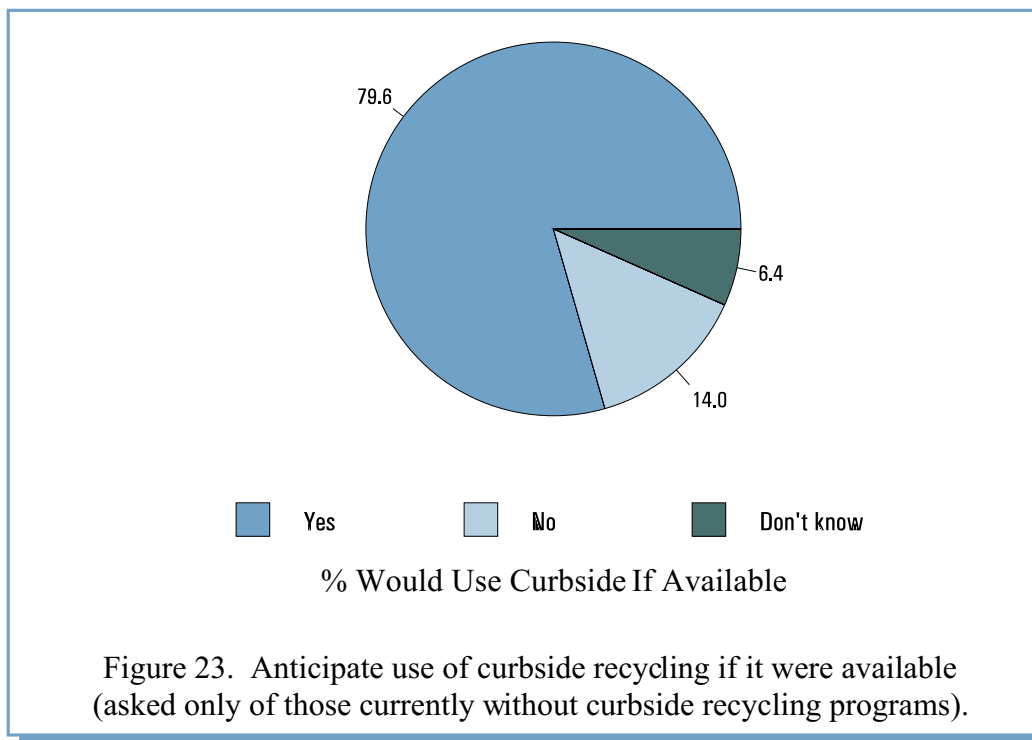
Table 15
Use Drop-Off Recycling
(% Within Demographic Group)

Drop off Recycling	<i>n</i>	% Household Uses Program
Gender		
Male	151	75.9
Female	210	76.6
Age Group		
18-24	34	75.6
25-34	46	79.3
35-44	77	77.0
45-54	70	73.7
55-64	47	78.3
65 and older	85	77.3
Community Type		
Rural	179	81.0
Urban	174	71.9
Income		
< \$35,000	141	74.2
\$35,000+	158	77.1

The two most commonly mentioned reasons (see Appendix D, Q21C1a) why respondents do not use drop-off recycling were that (1) the household uses curbside and (2) storing and sorting materials is inconvenient. Several respondents also mentioned that the drop-off site is too far away from their homes or it has inconvenient hours. Respondents living in households with an annual income of at least \$35,000 were more likely than those in other households to report that they did not use the drop-off program because they used curbside (41.3% vs. 16.7%, respectively). There were no other differences based on gender, age group, or community type.

Use of other programs. Too few respondents reported that their community had a recycling program other than curbside or drop-off to support analyses regarding the use of such programs.

Anticipated Use. Respondents in communities without curbside programs and respondents who were unsure about the availability of such programs were asked if they or anyone else in their household would use curbside recycling if such a program were available. **About 80% percent of these respondents reported that they or someone else in their household would use a curbside recycling program, if one was available (see Figure 23).**



The respondents were evenly divided regarding whether or not they would be willing to pay to have curbside recycling service in their communities (see Figure 24). Specifically, 50% of those who anticipate that their household would use curbside recycling reported that they would be willing to pay a fee in addition to their normal garbage pick-up fees. Older respondents, especially those aged 65 or older, were the least likely to report a willingness to pay an additional fee to have a community-based curbside recycling program (see Table 16). There were no differences in willingness to pay for curbside recycling based on gender, community type, or household income.

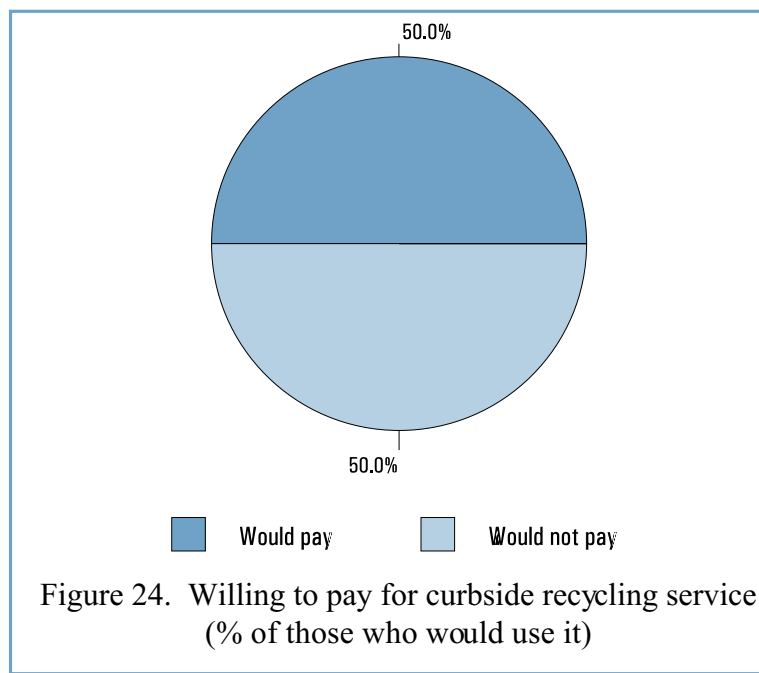
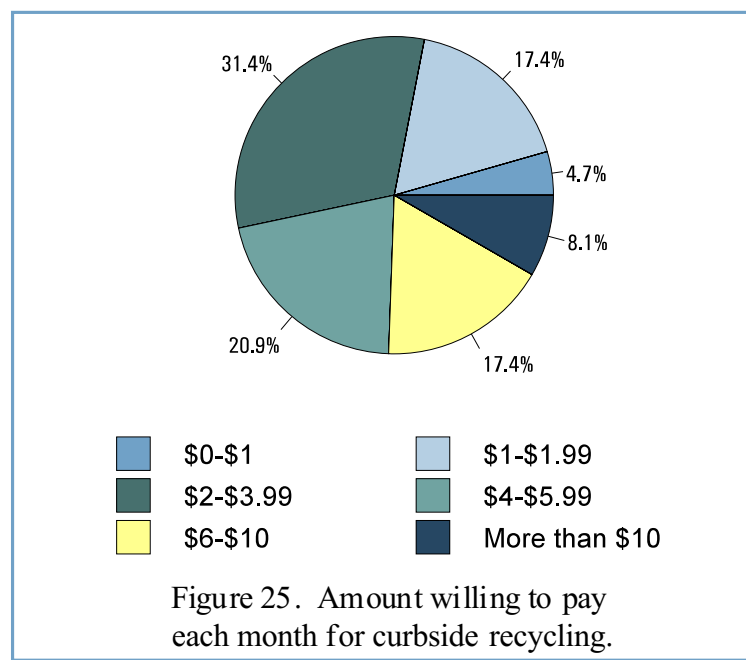


Table 16
Willingness to Pay for Curbside Recycling (% Within Demographic Group)

Pay for Curbside Recycling	<i>n</i>	% Willing to Pay for Curbside Recycling
Gender		
Male	42	50.6
Female	74	49.7
Age Group		
18-24	16	66.7
25-34	16	64.0
35-44	30	60.0
45-54	23	46.9
55-64	13	44.8
65 and older	18	32.7
Community Type		
Rural	73	46.5
Urban	41	57.7
Income		
< \$35,000	46	46.0
\$35,000+	51	58.6

Note. This table is based on respondents living in communities without curbside recycling and who report that the household would use it if they were available.

Of those who were willing to pay for curbside service, the monthly dollar amount that they would pay are shown in Figure 25. Twenty-two percent of these respondents reported that they would *not* be willing to pay more than \$1.99 for this service, whereas one-fourth were willing to pay \$6 or more for a curbside recycling program. The median response category was at least \$2 but less than \$3.99.



Focused Analysis

Disposal Practices by Type of Recycling Program. Only small proportions of the adult Iowans surveyed reported that they usually throw empty redeemable beverage containers in the trash or that they recycle the containers without receiving the refund. **The vast majority of respondents reported that they usually return empty redeemable beverage containers to have the deposit refunded, this was evidenced regardless of the presence or type of recycling programs available in their communities (see Table 17).** As reported previously, fewer than one in ten respondents reported that they usually recycle empty redeemable beverage containers without receiving the deposit. This low rate of recycling these types of empty containers was observed even among respondents living in communities with both drop-off and curbside recycling programs.

The availability of a curbside recycling program has a dramatic impact on the reported recycling of empty nonredeemable beverage containers (see Table 17). More than 70% of the respondents in communities with a curbside recycling program reported that they usually recycle empty nonredeemable beverage containers. In contrast, 57.8% of those respondents in communities with only a drop-off program report recycling such containers, and only 25.3% of the respondents in communities without a drop-off or curbside program report recycling such containers. These percentages are based on only those persons who possess or handle such containers.

Table 17
Disposal of Empty Beverage Containers
(% Within Recycling Program Availability)

Program	Redeemable Containers				Nonredeemable containers		
	Deposit refund	Throw away	Recycle	Something else	Throw away	Recycle	Something else
Curbside only							
% within program	94.0	1.4	2.3	2.3	27.1	71.9	1.0
Drop-off only							
% within program	84.5	3.1	8.2	4.1	39.4	57.8	2.8
Curbside and drop off							
% within program	88.4	1.8	6.9	2.9	24.3	73.7	1.9
Community does not have program							
% within program	95.2	1.2	1.2	2.4	68.0	25.3	6.7

Note. Persons who reported that they “did not know” to either of the questions and those respondents who do not possess or handle empty beverage containers were excluded from the analyses presented in the table above.

Without the Refundable Deposit. Seventy-two percent (72.7%) of the respondents who reported they usually redeem empty beverage containers said that if there no longer were refundable deposits that they would recycle the containers, whereas 26.6% reported that they would throw these containers in the trash. An important issue is the potential impact that ending the refundable deposit system would have on the disposal practices of individuals whose primary motivation for returning empty beverage containers was to receive the deposit refund. First, recall that 51.4% of respondents who reported returning redeemable beverage containers reported that receiving the refund was the main reason for returning empty containers. The second relevant statistic concerns the anticipated disposal practices of these respondents. Nearly one-third (32.7%) of those respondents who mainly return the containers to receive the deposit reported that they would throw the empty beverage containers in the trash if the containers were not redeemable.

At least two-thirds of those respondents living in communities with curbside, drop-off, or both types of programs reported that they would recycle empty beverage containers, even if there was no longer refundable deposits (see Table 18). In contrast, only 47.5% of those respondents living in communities without curbside or drop-off programs reported that they would recycle empty beverage containers if there was not a refundable deposit.

Table 18
Disposal of Containers if No Refundable Deposit
(% Within Recycling Program Availability)

Program	Anticipated Behavior		
	Throw away	Recycle	Something else
Curbside only			
% within program	21.3	77.8	0.9
Drop off only			
% within program	30.4	69.1	0.5
Curbside and drop off			
% within program	21.5	77.7	0.7
Community does not have program			
% within program	51.3	47.5	1.3

Note. Persons who reported that they “did not know” to either of the questions and those respondents who did not possess or handle empty beverage containers were excluded from the analyses presented in the table above. There were too few respondents who reported that their community had some other type of recycling program to allow for reliable cross-tabulations with these anticipated behaviors.

Support for the Bottle Bill. Responses regarding whether or not the beverage container law should be ended did not vary with (1) the presence or types of recycling community programs, or (2) the respondents’ anticipated behavior (e.g., throw away, drecycle) regarding the disposal of empty beverage containers if the deposit system were ended.

Expansion of the Bottle Bill. Responses regarding whether or not the beverage container law should be expanded to include other types of beverage containers did not vary according the presence or types of community recycling programs.

Attitudinal Measures. Mean agreement levels among respondents from communities with only curbside, only drop-off, both curbside and drop-off, or no community-level program were compared for several attitudinal measures germane to recycling. There were no statistical differences among these four groups with respect to the degree of agreement for that (a) a combination of curbside and beverage container deposit law is the best way to reduce the amount of materials going to the landfill, or (b) it is unsanitary or unhealthy to handle and store empty beverage containers. There were significant differences among mean ratings in terms of agreement that storing materials such as paper, plastic, glass, and metal is inconvenient (see Table 19). In Table 19, lower numbers indicate greater agreement. Storing materials was reported as a greater inconvenience among those without curbside recycling.

Table 19
Storing Containers is Inconvenient
(% Within Recycling Program Availability)

Program	Mean	Strongly agree 1	Agree 2	Uncertain 3	Disagree 4	Strongly disagree 5
Curbside only	3.4	1.3	30.2	3.1	55.6	9.8
Drop off only	3.2	5.5	32.8	4.5	52.7	4.5
Curbside and drop off	3.4	3.2	27.8	3.2	55.9	10.0
Community does not have program	3.1	10.8	26.5	9.6	45.8	7.2

Note. Lower mean scores indicate greater agreement.

Two additional analyses were conducted for the item concerning curbside recycling of beverage containers. If the deposit law was ended, those who use curbside programs were more likely to believe than those who do not use them that recycling would continue (see Table 20). Second, there was greater agreement to this item by respondents who reported they usually recycle empty nonredeemable beverage containers than by those who usually throw such containers in the trash (see Table 20).

Table 20
People Would Recycle Containers Using Curbside
If There Were No Longer Refundable Deposits

Household use of curbside recycling	Mean	Strongly agree 1	Agree 2	Uncertain 3	Disagree 4	Strongly disagree 5
Use curbside	2.8	7.6	44.5	12.5	29.8	5.6
Do not use curbside, but it is available	3.1	5.5	34.9	15.6	34.9	9.2
Current practice regarding empty nonredeemable beverage containers	Mean	Strongly agree 1	Agree 2	Uncertain 3	Disagree 4	Strongly disagree 5
Throw away now	3.2	3.9	35.9	10.5	39.5	10.2
Recycle now	2.8	7.0	44.5	14.6	29.7	4.2

Note. Lower mean scores indicate greater agreement.

An additional analysis was conducted for the item addressing the inconvenience of returning empty beverage containers to receive the deposit refund. There were statistically significant differences in mean agreement ratings based on whether the containers were usually redeemed at the same store they were purchased, a different store, or a redemption center (see Table 21). In Table 21, lower mean scores indicate greater agreement that returning the empty containers is an inconvenience. The greatest inconvenience was reported by those who return the containers to a store other than where the containers were purchased.

Table 21
Inconvenience of Redeeming Containers (% Within Location Redeemed)

Location return containers	Mean	Strongly agree 1	Agree 2	Uncertain 3	Disagree 4	Strongly disagree 5
Same store where purchased	3.5	3.3	23.3	2.0	64.5	7.0
Different store	3.2	4.5	33.3	3.6	53.2	5.4
Redemption center	3.5	3.3	22.8	3.3	65.2	5.4

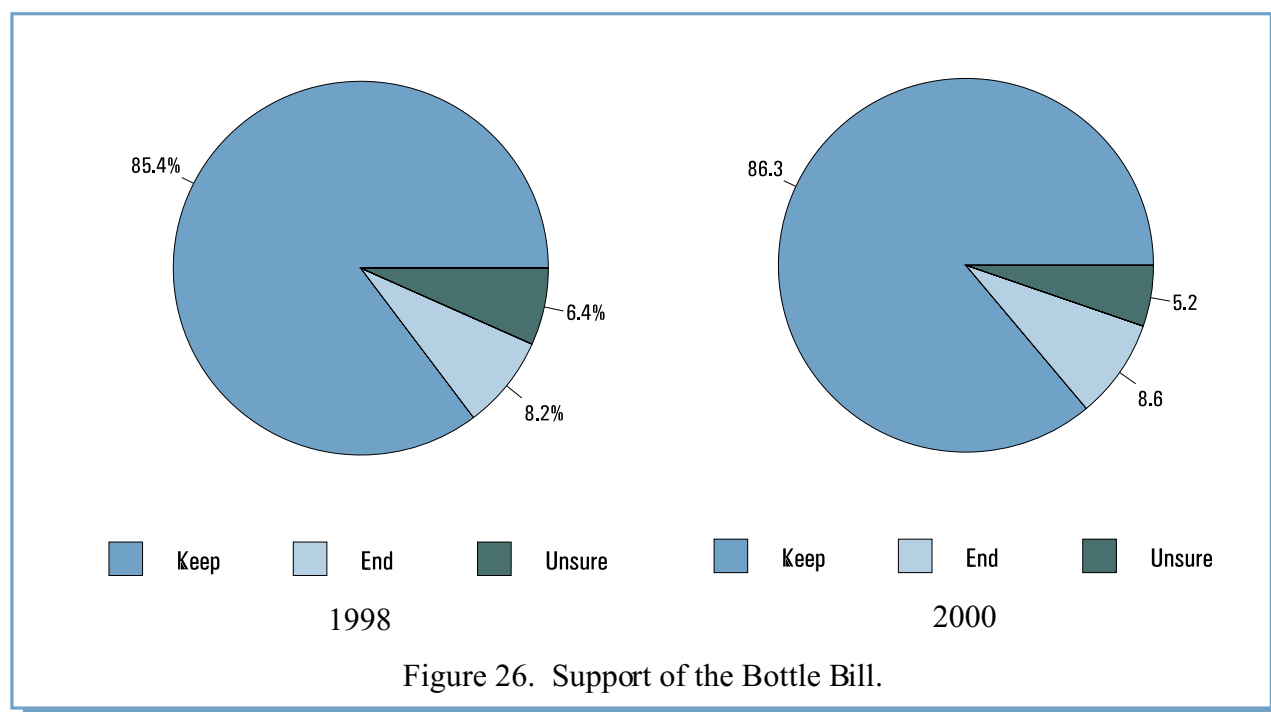
Note. Lower mean scores indicate greater agreement.

Revisiting the 1998 Survey

Redeemable Beverage Containers. The findings from the 1998 and 2000 surveys both show that the vast majority of respondents or someone in their household (96.7% in 1998 and 97.3% in 2000) has returned empty redeemable beverage containers to stores or redemption centers to have the deposit refunded. In both surveys, the most frequently reported reason for returning empty redeemable beverage containers to stores or redemption centers was to receive the deposit refund.

The majority of the respondents in both surveys reported that they usually take their empty redeemable beverage containers to the store where the beverages were purchased in order to have the deposit refunded (55.6% in 1998 and 56.4% in 2000). In 1998, one-fifth (20.9%) of those who returned redeemable beverage containers reported that they usually received the deposit refund at a redemption center, whereas 26.2% of those surveyed in 2000 reported usually taking their empty containers to redemption centers.

Support for the Bottle Bill. Comparing the results of the 1998 and 2000 surveys shows there was no change in the percentage of adults Iowans who favored maintaining the beverage container deposit law (see Figure 26).



In 1998, the respondents who reported the law should be ended were asked an open-ended question regarding their reasons for holding this position; likewise, those who reported that the law should be maintained were asked their reasons for holding this opinion. The most frequently mentioned reasons provided in the 1998 survey were rewritten in the 2000 survey as closed-ended position statements that asked the respondents to report whether or not each statement was a reason for either ending or keeping the law.

Across both surveys, the three most frequently mentioned or endorsed reasons for ending the law were concerning — (1) returning the empty containers (e.g., inconvenience), (2) storing empty containers (e.g., inconvenience), and (3) paying the refundable deposit. In the 1998 survey, reducing litter along highways and reducing litter in general were mentioned by 31.7% and 26.8% of the respondents, respectively, as reasons the law should be kept. Another major reason respondents in the 1998 survey mentioned for keeping the law was that more recycling would occur (27.4%). In the 2000 survey, each of these was endorsed as a reason to keep the law by more than 95% of those who reported that the law should be kept. Because of the different response format, the reader is reminded that direct comparisons of the percentages between the two surveys are not completely justified, but rather it is the similar pattern of responses that is informative.

In the 1998 survey, respondents were also asked open-ended questions regarding the advantages and disadvantages of the beverage container deposit law. The three most frequently mentioned advantages were — less litter along highways, less litter in general, and increased recycling of other materials. The three most frequently mentioned disadvantages were — inconvenience of the redemption process to the consumer, health or sanitation concerns for the consumer, and the initial costs to the consumer prior to redemption. In the 2000 survey, respondents were not asked open-ended questions regarding the advantages and disadvantages of the beverage container deposit law for several reasons. First, excluding this series of questions allowed items particularly germane to the current discussion surrounding the bottle bill to be included in the questionnaire. Second, it seemed unlikely that the perceived advantages and disadvantages of the beverage container deposit law would change substantially from 1998 to 2000. Obviously, the validity of this contention cannot be demonstrated without empirical data; however, the stability evidenced for the item regarding the level of public support for the law and the items concerning public opinion regarding reasons for or against the law are consistent with this supposition. Third, the responses in the 1998 survey were highly redundant for the “reason” and “advantages/disadvantages” question. Fourth, both surveys included attitudinal measures using 5-point scales which focused on the major advantages and disadvantages respondents provided to the open-ended question in 1998.

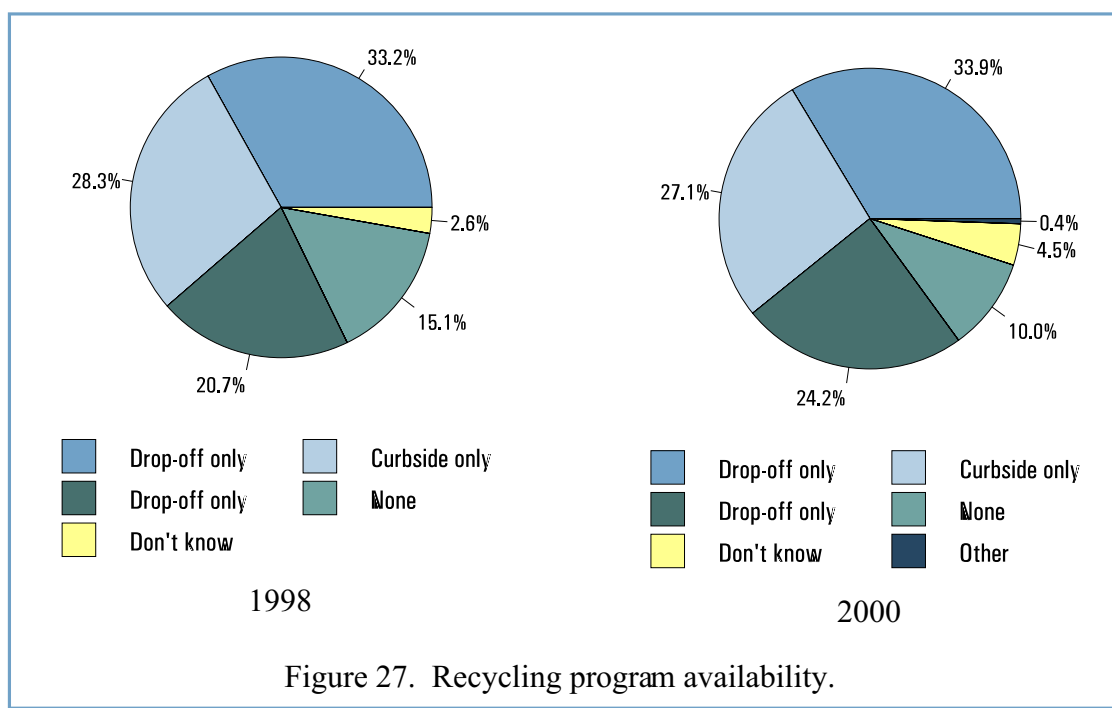
Expanding the Beverage Container Deposit Law. Opinions regarding whether the beverage container deposit law should be expanded to include having refundable deposits on containers for beverages such as teas, sports drinks, juices, and bottled water were assessed in both the 1998 and 2000 surveys. In both surveys, approximately three-fourths of the respondents supported expanding the bottle bill to include these other types of beverages (73.7% in 1998, and 76.7% in 2000).

Attitudinal Measures. In both the 1998 and the 2000 survey, the respondents were asked their level of agreement with a series of attitudinal statements concerning the beverage container deposit law and recycling. In both surveys, respondents rated their level of agreement using 5-point scales ranging from *strongly agree* to *strongly disagree*. The descriptive statistics presented in this portion of the report represent the combined percentages of those who responded either *strongly agree* or *agree*.

- In 1998, 93.5% of the respondents agreed that there is less litter along Iowa's highways because of the beverage container deposit law, and 89.2% of the respondents agreed that many parks and recreation areas in Iowa have less bottle and can litter because of the law. In the 2000 survey, respondents were asked about litter in public places. That is, the 2000 survey combined the concepts of litter along roadways and in parks. In the 2000 survey, 88.4% of the respondent agreed that because of the beverage container deposit law there is less litter in Iowa public places such as parks and along roadways.
- Respondents in the 1998 survey were asked to provide responses to two attitudinal statements concerning the economic effects of the beverage container deposit law. Specifically, 57.9% agreed that the beverage container deposit law provides economic benefits for the state of Iowa, and 80.9% agreed that the law has created additional employment opportunities for people in Iowa. The main interest in the 2000 survey was to assess agreement regarding the economic impact for Iowa in general, rather than for the State of Iowa per se or regarding employment opportunities exclusively. Thus, the statement in the 2000 survey was phrased in terms of economic benefits for Iowa such as additional employment opportunities. There was agreement with this statement by 73.9% of those surveyed in 2000.
- The level of agreement that recycling bottles and cans uses less energy and materials than manufacturing new ones was stable between the 1998 and 2000 surveys (84.8% and 82.1% agreement, respectively).
- An equal percentage of respondents supported a national beverage container deposit law in the 1998 and 2000 surveys (73.9% vs. 73.6%, respectively).
- In 1998, there was agreement by 82.7% of the respondents with the statement – “By my having to return beverage containers, I have developed a more positive attitude about recycling.” In contrast, 68.2% of the respondents in the 2000 survey expressed agreement with the statement – “Having to return beverage containers to get my deposit refunded has improved my attitudes about recycling.” Given the very high level of positive attitudes about recycling in 1998, it may not be surprising that fewer reported an “improved “ attitude in 2000.

- With respect to curbside recycling, 59.7% of the respondents in the 1998 survey expressed agreement with the contention that most people would continue to recycle beverage containers by using curbside recycling if it were available. In the 2000 survey, 47.7% of the respondents expressed agreement with this statement.
- The percentage of respondents who agreed that a combination of the beverage container deposit law and curbside recycling is the best way to decrease the amount of materials going into landfills was similar in the two surveys (91.7% in 1998 and 88.8% in 2000).

Recycling Programs. In the past 2 years, there have been changes in the types of recycling programs that respondents reported are available within their communities (see Figure 27). In the 1998 survey, only 20.7% of the respondents reported that there were both curbside and drop-off recycling programs in their communities. In contrast, one-third (33.9%) of the respondents in 2000 reported having both types of programs in their communities.



Those respondents who lived in communities without curbside recycling programs were asked whether they or someone else in their household would use curbside recycling if it were available. In 1998, 74.6% of such respondents reported that their household would use curbside recycling. In the 2000 survey, 79.6% of respondents currently without a curbside recycling program said that someone from their household would use the program if it were available to them.

Summary

Most Iowans live in households where someone has redeemed an empty beverage container. Although there are several possible motivations for redeeming empty beverage containers, the most frequently reported reason was to have the deposit refunded. Reducing clutter and protecting the environment were the main motivations for about one-fifth of those surveyed. The vast majority of respondents reported they usually redeem empty beverage containers as opposed to throwing them away or recycling them. Typically, empty redeemable beverage containers are returned to the store where they were purchased or to a different store. Approximately one in four Iowans who redeem their empty containers reported usually taking the containers to redemption centers. Redemption center usage was more likely among those living in rural than in urban communities. However, even in rural areas, the empty containers were most often returned to the store from which they were purchased.

The percentage of Iowans who would throw empty beverage containers in the trash would likely increase if the refundable deposit system was ended. Although more than 70% of Iowans reported that they would recycle the empty containers (even if there were no longer deposits), approximately 27% reported that they expected that they would usually throw the containers in the trash. In comparison, less than 3% of Iowans usually throw these containers in the trash under the present system. It is also important to note that currently less than one-third usually recycle nonredeemable beverage containers, whereas more than one-half of Iowans report that they usually throw empty nonredeemable beverage containers in the trash.

Nearly 90% of adult Iowans agreed that a combination of the bottle bill and curbside recycling was the best way to decrease the amount of material entering landfills. Currently, more than 60% of those surveyed reported that curbside recycling was available in their community. This statistic should not be misinterpreted to mean that 60% of the communities in Iowa have a curbside recycling program. Nearly 80% of those surveyed who lived in communities without curbside recycling reported that they or someone else in the household would use the program if it were available. However, only one-half of them were willing to pay an extra monthly fee for this service.

Currently, monies from unredeemable containers remains with the beverage distributors. There was strong public support for having such monies directed to a fund for recycling and environmental programs. Three out of four adult Iowans supported this general concept; however, it is important to note that the question in this survey did not specify whether the fund would be managed by private industry or the government.

Generally, adult Iowans reported that they were familiar with the beverage container deposit law. They were also highly supportive of the law. Nearly 93% of those surveyed reported that they mildly or strongly supported the law, and 86% reported that the law should *not* be ended. Among those who reported that the law should not be ended, more than 95% agreed it should be maintained because it reduces litter, decreases materials in landfills, and encourages recycling of other materials. It is also noteworthy that the majority of Iowans disagreed that storing and returning empty beverage containers was an inconvenience for them.

There is a high level of support for expanding the beverage container law to include containers for beverages such as teas, sports drinks, juices, and bottled water. More than 80% of those with an opinion expressed support for expanding the law to include containers from these other types of beverages. In addition to expanding Iowa's beverage container deposit law, nearly three-fourths of Iowans expressed favorable opinions regarding the adoption of a national beverage container law.

In conclusion, there is a high level of familiarity with and use of Iowa's beverage container deposit law. Generally, Iowans expressed favorable opinions of the law and were opposed to ending it. Furthermore, the majority of adult Iowans reported that they supported expanding the law to include other types of beverage containers.

Appendix A

*Iowa Department of Natural Resources
2000 Beverage Container Recycle Questionnaire*

CENTER FOR SOCIAL AND BEHAVIORAL RESEARCH
University of Northern Iowa

Iowa Department of Natural Resources
2000 Beverage Container Recycle Study
INTRO1

HELLO, this is [YOUR NAME] calling for the Department of Natural Resources. I would appreciate just a few minutes of your time to explain a research project. We are conducting a scientific study concerning the recycling or redemption of containers for beverages such as soda and beer.

Have I reached XXX-XXX-XXXX

1 = Yes

2 = No **[EXIT: I am sorry I must have misdialed. I am sorry to have bothered you. Thank you for your time.]**

Is this a residential phone number?

1 = Yes

2 = No **[EXIT: We are only trying to call people at their homes. I'm sorry to have bothered you. Good-bye.]**

ADULTS

In order to determine who we need to interview from your household, I need to know how many adults, 18 years of age or older, live in your household?

[] Adults **[IF ONE ADULT --> Is that you?**

1 = Yes

2 = No **[SKIP TO INTRO 2, ask for age and sex, schedule callback]**

Then you are the person I need to speak with. **[GO TO CONFIDENTIAL]**

RESPONDENT

Of those adults, could you please tell me the age and gender of the adult who had the most recent birthday?

[_____] **[IMPORT TO CONTACT NAME FIELD]**

Is that you?

1 = Yes **[GO TO CONFIDENTIALITY]**

2 = No

May I speak to that person?

1 = Yes, coming to phone **[GO TO INTRO2]**

2 = Not available **[GO TO INTRO2 AND SCHEDULE BEST TIME TO CALLBACK]**

INTRO2

HELLO, this is [YOUR NAME] calling for the Department of Natural Resources. I would appreciate just a few minutes of your time to explain a research project. We are conducting a scientific study concerning the recycling or redemption of containers for beverages such as soda and beer. You have been chosen from among the adults in your household to participate in the study and to represent many other individuals in the state.

CONFIDENTIAL

I would like to ask you a few questions about recycling and the beverage container deposit law in Iowa. This law is also known as the bottle bill. Your opinions are very important to us and will help represent many other people in the state. The interview will only take about 10 to 15 minutes and your participation is voluntary and confidential. Your responses are anonymous and if we come to any question you do not wish to answer, just let me know and we can move on to the next question. If you have a few minutes, I'd like to begin.

Q1. In 1979, the beverage container deposit law was passed which required that customers pay 5 cent deposits when purchasing certain beverage containers. This 5 cent deposit is then refunded when the **redeemable** beverage container is returned to a retailer or redemption center. Are you familiar with this law?

1. Yes

2. No

7. DON'T KNOW/NOT SURE

9. REFUSED

Q2. The next several questions are about redeemable beverage containers. Have you or anyone else in your household ever returned an empty redeemable beverage container to a store or a redemption center to receive the deposit refund?

1. Yes

2. No

7. DON'T KNOW/NOT SURE

9. REFUSED[IF Q2 EQ 1, SKIP TO Q4]

[IF Q2 GE 7, SKIP TO Q5]

Q3. What is the **main** reason that your household does not return these containers to have the deposit refunded? [SELECT ONLY ONE]

1. Don't buy beverages in these containers
2. Give to charity or other groups (Scouts, church, etc.)
3. Inconvenience of storing the containers
4. Sanitation concerns about storing containers
5. Inconvenience of returning containers
6. Too busy/no time
7. Take containers to recycling center or use curbside recycling where deposits are not refunded
8. No reason
9. OTHER [SPECIFY]

99. REFUSED

[SKIP TO Q5]

Q4. Is the **main** reason these containers are returned ...

1. to get the refund,
2. to protect the environment,
3. to reduce clutter by getting rid of them, or
4. something else? [SPECIFY]

7. DON'T KNOW/UNSURE

9. REFUSED

Q5. What is your opinion of the beverage container deposit law? Do you...

1. Strongly support it,
2. Mildly support it,
3. Mildly oppose it, or
4. Strongly oppose it?

7. DON'T KNOW/UNSURE

9. REFUSED

Q6. Do you **drink** the **greatest number** of beverages that come in redeemable containers....

1. At your home or someone else's,
2. At work, or
3. Someplace else? [SPECIFY]

7. DON'T KNOW/UNSURE

8. Does NOT consume these types of beverages

9. REFUSED

Q7. Do you **usually** return **redeemable** beverage containers to have the deposit refunded, throw them away, recycle them without collecting the deposit, or do something else?

1. Redeem to have deposit refunded
2. Throw away
3. Recycle without collecting the deposit
4. Something else [SPECIFY]
7. **Don't know/unsure**
8. **No one in the household purchases or consumes beverages in redeemable containers**
9. **Refused**

[IF Q7=8, SKIP TO Q10]

Q8. [ASK ONLY IF Q7=1] Where do you **usually** redeem your beverage containers? Is it....

1. at the store where they were purchased,
2. a different store that sells the same product,
3. a redemption center, or
4. someplace else? [SPECIFY]
7. **DON'T KNOW/NOT SURE**
9. **REFUSED**

Q9. If you didn't have to pay a deposit on these beverage containers and you could no longer redeem them, do you think you would usually throw away the empty containers, recycle them or do something else?

1. Throw away
2. Recycle
3. Something else [SPECIFY]
7. **DON'T KNOW/NOT SURE**
9. **REFUSED**

Q10. **Unredeemed containers** are those that consumers did not return to have their deposit refunded. Since 1979, the deposit money for unredeemed containers stays with the beverage distributor. Some people believe that this money should continue to stay with the beverage distributors, but other people think that money should be put into a fund for recycling and environmental programs. Which of these two positions is closest to your view ...

1. Deposits kept by the beverage distributors, or a
2. Fund to use for recycling and environmental programs?
7. **DON'T KNOW/NOT SURE**
9. **REFUSED**

Q11. Some people have proposed that the Iowa Legislature discontinue the beverage container deposit law. Do you think this law should be ended?

1. Yes
2. No
7. **DON'T KNOW**
9. **REFUSED**

[IF Q11=2 SKIP TO Q14]

[IF Q11>2 SKIP TO Q16]

Q12. Do you think the law should be ended because.....

- a. the consumer has to pay the refundable deposit?
- b. the consumer has to store empty containers?
- c. the consumer has to return containers to a store or redemption center?
- d. of the availability of curbside recycling?
- e. of the availability of drop-off recycling centers?

1. Yes, a reason
2. No, not a reason
7. **DON'T KNOW**
9. **REFUSED**

Q13. Is there any other reason why you think the law should be ended?

1. Yes, [SPECIFY]
2. No
7. **DON'T KNOW**
9. **REFUSED**

[SKIP TO Q16]

Q14. Do you think the law should be kept because.....

- a. it reduces litter in general?
- b. it reduces litter along roadways?
- c. it encourages recycling?
- d. it decreases the amount of material added to landfills?

- 1. Yes, reason to keep law
- 2. No, NOT a reason to keep law

7. DON'T KNOW

9. REFUSED

Q15. Is there any other reason why you think the law should be kept?

- 1. Yes, [SPECIFY]
- 2. No

7. DON'T KNOW

9. REFUSED

Q16. The next few questions are about beverages such as teas, sports drinks, juices and bottled water that currently come in **nonredeemable** containers. Do you drink the greatest number of beverages that come in **nonredeemable** containers....

- 1. At your home or someone else's,
 - 2. At work, or
 - 3. Someplace else? [SPECIFY]
- 7. DON'T KNOW/UNSURE**
- 8. Do NOT consume these types of beverages**
- 9. REFUSED**

Q17. Do you usually throw away **nonredeemable** beverage containers, recycle them or do something else?

- 1. Throw away
 - 2. Recycle
 - 3. Something else [SPECIFY]
- 7. NOT SURE**
- 8. Never consume or possess these types of containers**
- 9. REFUSED**

Q18. In 1979, we did not have all the beverage choices that we do now. Do you think these other types of bottled or canned beverages such as teas, sports drinks, juices and bottled water should have a refundable deposit?

1. Yes
2. No
7. **NOT SURE**
9. **REFUSED**

Q19. Now I'm going to read to you some statements that some people have made about the beverage container deposit law. After I read each statement, please tell me if you "Strongly agree", "Agree", are "Uncertain", "Disagree", or "Strongly disagree" with it.

[RANDOMIZE]

- a. Because of the beverage container deposit law, there is less litter in Iowa's public places such as in parks and along roadways.
- b. The beverage container deposit law provides economic benefits for Iowa, such as additional employment opportunities.
- c. By recycling bottles and cans we use less energy and materials manufacturing new bottles and cans.
- d. If the beverage container deposit law was ended, most people would continue to recycle beverage containers by using curbside recycling if it was available.
- e. There should be a national beverage container law.
- f. The beverage container deposit law should be expanded to include other beverage containers.
- g. A combination beverage container deposit law and curbside recycling program is the best way to decrease the amount of material going into landfills.
- h. It is unsanitary or unhealthy to handle and store empty beverage containers.

1. Strongly agree
2. Agree
3. Uncertain
4. Disagree
5. Strongly disagree
9. **REFUSED**

Q19I. Now I'm going to read you a statement about your experiences with the beverage container deposit law. After the statement, please tell me if you "Strongly agree", "Agree", are "Uncertain", "Disagree", or "Strongly disagree" with it.

Storing materials such as paper, plastic, glass and metal for recycling is an inconvenience for me.

1. Strongly agree
2. Agree
3. Uncertain
4. Disagree
5. Strongly disagree
- 6. DON'T REDEEM AT STORES**
- 9. REFUSED**

Q20. [IF Q2>1 SKIP TO Q21A; Note: To provide a smooth transition between question series, the Q19I and Q20 series lead-in varied depending on whether or not respondents were to skip the Q20 series.] I have a few more statements about your experiences with the beverage container deposit law. After I read each statement, please tell me if you "Strongly agree", "Agree", are "Uncertain", "Disagree", or "Strongly disagree" with it.

[RANDOMIZE]

- a. Storing empty redeemable beverage containers is an inconvenience for me.
- b. Returning empty containers to a store or redemption center to receive the deposit refund is an inconvenience for me.
- c. Having to return beverage containers to get my deposit refunded has improved my attitude about recycling.
- d. Having to return beverage containers to get my deposit refunded has increased the amount of other materials that I recycle.
- e. While I am at the store to redeem beverage containers, I often make a purchase.

1. Strongly agree
2. Agree
3. Uncertain
4. Disagree
5. Strongly disagree
- 6. DON'T REDEEM AT STORES**
- 9. REFUSED**

Q21A. What, if any, types of recycling programs does your community have? Does your community have...

1. Curbside only,
2. Drop off only,
3. Curbside AND drop off,
4. Something else [SPECIFY], or
5. Does your community not have a recycling program?
- 7. DON'T KNOW**
- 9. REFUSED**

[IF Q21A>4 SKIP TO Q22A]

Q21B1:[Ask only if Q21A = 1 or Q21A = 3] Do you or anyone else in your household use curbside recycling?

1. Yes
2. No
- 7. DON'T KNOW**
- 9. REFUSED**

Q21B1a: [Ask only if Q21B1 = 2] What is the **main** reason your household does not use curbside recycling?

[SELECT ONLY ONE]

1. There are too few pickup dates
2. Sorting and storing the materials is inconvenient
3. Cost to your household e.g., subscription fees
4. Some other reason [SPECIFY]
- 7. DON'T KNOW**
- 9. REFUSED**

Q21C1: [Ask only if Q21A = 2 or Q21A = 3] Do you or anyone else in your household use drop-off recycling?

1. Yes
2. No
- 7. DON'T KNOW**
- 9. REFUSED**

Q21C1a:[Ask only if Q21C1= 2] What is the **main** reason your household does not use drop-off recycling?

[SELECT ONLY ONE]

1. The drop off site is too far away
2. Sorting and storing the materials is inconvenient
3. Cost to your household e.g., disposal fees and transportation expenses
4. Drop off site hours are inconvenient
5. Some other reason [SPECIFY]
- 7. DON'T KNOW**
- 9. REFUSED**

Q21D1: [Ask only if Q21A = 4] Do you or anyone else in your household use this recycling program?

1. Yes
2. No
- 7. DON'T KNOW**
- 9. REFUSED**

Q21D1a:[Ask only if Q21D1 = 2] What is the **main** reason your household does not use this recycling program?

[SELECT ONLY ONE]

1. The drop off site is too far away
2. Sorting and storing the materials is inconvenient
3. Cost to your household e.g., transportation expenses and all types of fees
4. Drop off site hours are inconvenient
5. Too few pick up dates
6. Some other reason [SPECIFY]
- 7. DON'T KNOW**
- 9. REFUSED**

Q22A. [IF Q21A=1 OR Q21A=3 skip toDM1] If a curbside recycling program was available in your community, would you or someone else in your household use it?

1. Yes
2. No
- 7. DON'T KNOW**
- 9. REFUSED**

[IF Q22A> 1 SKIP TO DM1]

Q22B. Would you be willing to pay to have a curbside recycling program? This amount would be in addition to any normal garbage pick-up fees you currently pay.

1. Yes
2. No

7. DON'T KNOW/UNSURE

9. REFUSED

[IF Q22B>1 SKIP TO DM1]

Q22C. How much extra per month would you be willing to pay?

0. Nothing
1. Less than \$1
2. \$1 to \$1.99
3. \$2 to \$3.99
4. \$4 to \$5.99
5. \$6 to 10
6. More than \$10 per month
- 7. DON'T KNOW**
- 9. REFUSED**

DEMOGRAPHICS

DM1. We have just a few more questions and we will be finished. These questions are for analysis purposes only and will only be used to group your responses.

Approximately how many years have you lived in Iowa?

[ASK FOR TOTAL YEARS. NOT CONSECUTIVE YEARS]

[YEARS] _____

00= LESS THAN ONE

99=REFUSED

DM2. What county do you currently live in? [OPEN]

DM3. Which best describes your current place of residence? Is it....

1. On a farm or in an open rural area,
2. In a small town with less than 2,500 people,
3. In a town with 2,500 to less than 5,000 people,
4. In a large town with 5,000 to less than 25,000 people,
5. In a small city with 25,000 to less than 50,000 people, or
6. A metropolitan area with 50,000 or more people?
- 7. DON'T KNOW/NOT SURE**
- 9. REFUSED**

DM4. What is your zip code?

[ZIP CODE] _____
00000 DON'T KNOW/REFUSED

DM5. What is your marital status? Are you...

1. married
2. divorced
3. widowed
4. separated, or
5. single and never been married
- 9 = REFUSED**

[IF DM5 =1, SKIP TO DM7]

DM6. Are you currently living with a partner?

1. Yes
2. No
- 9 = REFUSED**

DM7. How many children, 17 years old or younger, live in your household 6 months or more of the year?

[ACTUAL NUMBER] _____
99. REFUSED

DM8. What is your age? [ACTUAL NUMBER]

[] years
777 =DON'T KNOW/NOT SURE
999 = REFUSED

DM9. And you are...

1. Male
2. Female
- 9. REFUSED**

DM10. Are you of Hispanic, Latino or Spanish origin?

1. Yes
2. No
- 7. DON'T KNOW/NOT SURE**
- 9. REFUSED**

DM11. What race do you consider yourself to be?

1. American Indian or Alaska Native
2. Asian
3. Black or African American
4. Native Hawaiian or Other Pacific Islander
5. White (Caucasian)
6. Some other race or mix of races [SPECIFY]
- 7. DON'T KNOW/NOT SURE**
- 9. REFUSED**

DM12. What is the highest level of education you have completed?

11. Never attended school or only attended kindergarten
12. Grades 1 to 8 (Elementary)
13. Grade 9 through 11 or (Some high school)
14. Grade 12 or GED (High School graduate)
15. College 1 year to 3 years (Some 4-year college, technical school, AA, etc.)
16. College 4 years or more (College graduate, BA, BS, etc.)
17. Graduate degree completed (MA, MS, MFA, MBA, MD, PhD, etc)
- 77 =DON'T KNOW/NOT SURE**
- 99=REFUSED**

INCOME. Is your annual gross household income from all sources...

- 11. Less than \$25,000 (IF NO, ASK 15; IF YES, ASK 12)
- 12. Less than \$20,000 (IF NO, CODE 11; IF YES, ASK 13)
- 13. Less than \$15,000 (IF NO, CODE 12; IF YES, ASK 14)
- 14. Less than \$10,000 (IF NO, CODE 13)
- 15. Less than \$35,000 (IF NO, ASK 16)
- 16. Less than \$50,000 (IF NO, ASK 17)
- 17. Less than \$75,000 (IF NO, ASK 18)
- 18. \$75,000 or more

7 =DON'T KNOW/NOT SURE

9 = REFUSED

INCOME2. So your annual gross household income is between _____ and _____?

1 = Yes

2 = No [REASK INCOME]

7 =DON'T KNOW/NOT SURE

9 = REFUSED

CLOSE: Those are all the questions I have for you. Thank you very much for your time and cooperation. Good-bye.

INTERVIEWER COMMENTS:

Appendix B

Explanation of Disposition Codes

Disposition	Definitions
Refusal	Household Refusal: Refused twice by someone other than the respondent. Respondent Refusal: Respondent refuses to do the interview.
Incomplete	Interview was started but could not be completed.
No Eligible Respondent During Interviewing Period	Respondent is not available during the interviewing period because of a temporary situation such as death in the family, vacation, business trip, etc. This must be a long-term absence, but one that would allow them to participate at a different time.
Non-eligible Number	Not a residential phone number (e.g., teen-lines, businesses, government offices, institutions, dormitories, nursing homes, prisons, group homes, shelter, fraternities, sororities, half-way houses, pagers, beepers, fax machines, and computers).
Respondent Unable to Communicate	Permanent disability (e.g., such as mentally incompetent to understand questions, hard of hearing, terminal illness, speech impairment) that does not allow the respondent to participate at any time. Also, include language barriers.
10+ Attempts, All Answering Machine	All 10 attempts result in an answering machine.
10+ Attempts, All No Answer	All 10 attempts result in a no answer.
10+ Call Backs	The respondent has been tried a minimum of 10 times.
Non Working Number	The number dialed cannot be reached, has been disconnected, is no longer in service, has been changed to a different number, second attempt on a fast busy and is still fast busy, three or four rings and dead air.

Appendix C

Attitudinal Statements

Table C1
Beverage Container Deposit Law Attitudinal Statements Differences By Age Group

Attitudinal Statements	Statistically Differences
Because of the beverage container deposit law, there is less litter in Iowa's public places such as parks and along roadways	<ul style="list-style-type: none"> ▶ 18 to 24-year-olds agreed less than 35 to 44-year olds ▶ 18 to 24-year-olds agreed less than 45 to 54-year olds ▶ 18 to 24-year-olds agreed less than 55 to 64-year olds
Recycling bottles and cans uses less energy and materials than manufacturing new bottles and cans	▶ 45 to 54-year-olds agreed more than those 65 and older
Having to return beverage containers to get my deposit refunded has improved my attitudes about recycling	<ul style="list-style-type: none"> ▶ 25 to 34-year-olds agreed more than 35 to 44-year-olds ▶ 35 to 44-year-olds agreed less than those 55 and older
Returning empty containers to a store or redemption center to receive the deposit refund is an inconvenience for me	▶ 35 to 44-year-olds agreed more than those 65 and older
Storing empty redeemable beverage containers is an inconvenience for me	▶ 35 to 44-year-olds agreed more than those 65 and older

Note. Games-Howell post hoc multiple comparison procedure was used with a 95% confidence level. Only significant pairwise comparisons are reported.

Table C2
Beverage Container Deposit Law Attitudinal Statements Mean Ratings By Age Group

Attitudinal Statements	Mean					
	18-24	25-34	35-44	45-54	55-64	65+
Because of the beverage container deposit law, there is less litter in Iowa's public places such as parks and along roadways	2.2	1.8	1.8	1.8	1.8	1.9
Recycling bottles and cans uses less energy and materials than manufacturing new bottles and cans	2.0	2.0	2.0	1.8	2.0	2.2
Having to return beverage containers to get my deposit refunded has improved my attitudes about recycling	2.4	2.3	2.7	2.4	2.4	2.3
Returning empty containers to a store or redemption center to receive the deposit refund is an inconvenience for me	3.5	3.4	3.2	3.3	3.5	3.6
Storing empty redeemable beverage containers is an inconvenience for me	3.4	3.5	3.2	3.3	3.5	3.6

Note. Higher means indicate greater disagreement with the statement.

Table C3
Recycling Attitudinal Statements Differences by Age Group

Recycling Attitudinal Statements	Statistically Significant Difference
If the beverage container deposit law was ended, most people would continue to recycle beverage containers by using curbside recycling if it was available	▶ 25 to 34-year-olds agreed less than those 65 and older

Note. Games-Howell post hoc multiple comparison procedure was used with a 95% confidence level. Only significant pairwise comparisons are reported.

Appendix D

Open Ended Responses

Q3. What is the main reason that your household does not return these containers to have the deposit refunded? “Other Responses”:

- Disabled, and costs her too much to go to the redemption center.
- Didn’t know about the law.
- Buy in Nebraska.

Q6. Do you drink the greatest number of redeemable containers... “Someplace else”:

- Ball game, other activity.
- When eating out.
- All of the above.
- School.
- In the car.
- At home.
- Restaurants.
- All of the above.
- Restaurants.
- Various places.
- While driving.
- In the car.
- In the car traveling.
- School.
- In truck.
- All of the above.
- Driving or restaurant.
- Northeast Iowa.
- In car.
- Buy in South Dakota.
- School.
- Restaurant
- The bar.
- Convenience store.
- Restaurants and bars.

Q7. Do you usually return redeemable beverage containers to have the deposit refunded, throw them away, recycle them with collecting the deposit, or something else? “Something else”:

- Give them to charity.
- Donate to COC.
- Redeeming them or throwing them away.
- Give away to anyone who asks for them.
- Give to charity events.
- Gives them to someone else to take them away.
- Give to grandchildren for allowance.

Q7 Do you usually return redeemable beverage containers to have the deposit refunded, throw them away, recycle them with collecting the deposit, or something else? “Something else” (Continued):

- Give can to group to be redeemed.
- Donate to an organization.
- Buy in Wisconsin so they don't pay deposit.
- Take the bottle to her daughter's house and she then redeems them.
- Donate the bottles to the local church.
- Put in bins at work.
- Leave them at work.
- Give them away.
- Give to an opportunity center to get the money.
- Gives them to a friend, and he redeems them.
- Leave at work where they are then recycled.
- Take them to Omaha to redeem by the pound.
- Buy in South Dakota.
- Give it to someone else to get the deposit.
- Fund-raiser, donate them to the school.

Q8. Where do you usually redeem your beverage containers? “Someplace else”:

- Cans to your town collection.
- Wherever she happens to be when she takes them in.
- I have usually taken to all these places.
- Casey's.
- Store for the handicapped that redeems bottles.
- Give them away to children and they recycle them.
- Local gas station.
- Takes everything to a recycling center a few times a year.
- A Chinese man picks them up for us.
- Return spots vary.
- Give to local groups.

Q9. If you didn't have to pay a deposit on these beverage containers and you could no longer redeem them, do you think you would usually throw away the empty containers, recycle them or do something else? “Something else”:

- It would be difficult for people to recycle without the deposit.
- Take to scrap metal place.
- Recycle some, throw some away.
- Recycle and throw away.
- Give them to her grandson, he does that stuff – I think scouts.
- Give to kids that come around to collect them.
- Keep them in case they put a deposit on them.

Q13. Is there any other reason why you think the law should be ended?

- Inconvenient.
- Lots of people don't use so the money is wasted, what is the point?
- It is a hassle.
- People are more aware that we need to recycle. They would do it anyway.
- Iowa loses money and lots of containers are Not being recycled, there should be a better way.
- It is rather expensive now that gas is so high it is expensive to go to the redemption center and they would do it anyway.
- Because it unjustly singles out the beverage Industry, costs a lot of money.
- The containers are not big enough, some of the people who are making the money off of recyclables should be returned to the consumers.
- Intrusive.
- Think Iowa's losing a lot of money, people living near border go across state lines so they don't have to pay deposit.
- It is cheaper in other states and the 5 cent deposit adds up in a hurry.
- People will recycle on their own.
- Hassle for the stores.
- It's inconvenient.
- I think it's costing the stores money having to handle containers.
- It costs a little bit of money.
- Hassle and dirty and not fair to store or customers.
- Should be a nationwide law, not just one state. Can get cans from other states when you live on the border. Nickel doesn't mean much, so the cans are getting thrown out. Water bottles need to be refundable.
- It is an extra expense.
- Don't like paying the nickel and keeping track of the can to redeem it.
- Lives close to border, so has to keep them separated from those from Minnesota since can't return.
- Hassle.
- It is more efficient to recycle.
- It's a pain.
- Lots of times you can't get them returned, inconvenience of storing them.

Q15. Is there any reasons why you think the law should be kept?

- Beauty of environment.
- Income for people who have nothing else to do-people who pick them up.
- So elderly pick up because they need the extra money.
- Don't like to see cans along road because of deposit people pick them up.
- Gives people extra money.
- Important to people that collect cans for money/income.
- Good for the environment.
- Better for the environment.
- It works and provides secondary income for some.
- Older people and homeless are helped by this.

Q15. Is there any reasons why you think the law should be kept? (Continued):

- It gives handicapped people a job, everything is great.
- Keeps glass from breaking.
- Environment overall.
- Keeps the place clean.
- Creates jobs in the state.
- Good mental discipline for people, makes people aware of environmental issues and makes people aware of need to recycle other products.
- Does a great deal of cleaning up in Iowa.
- Helps people with low incomes and it has really cleaned up road sides!
- Keeps environment clean.
- Help support people who collect the cans for income.
- Way of funding for people that don't have a lot of money.
- Help supplement poor incomes.
- Everybody is used to it.
- States without law don't recycle as much, dirty.
- Without we are a throw away society.
- Helps people pay bills by collecting cans for money.
- Safety precautions, so you don't mow over them.
- Less use of natural resources.
- It's a good idea.
- It gives you cash.
- Have a friend in the recycling business.
- Gives money.
- Helps environment.
- Think it's a good law.
- Source of income for some people.
- It's a way to conserve resources.
- Many people depend on it.
- Good for the environment.
- While traveling you can tell if there's a state that doesn't have it.
- It creates jobs for handicapped people, etc.
- People can make extra money picking up containers.
- Motivation and helps people out that collects cans, and charities.
- Because of dwindling resources.
- People with fixed income can use the money to buy groceries, etc.
- Reduces use of energy when producing new cans.
- It produces monies for those looking for cans and bottles.
- Gives people something to do by going out and picking them up along roadways.
- Make people feel good that they are able to do something-most of the time, people can feel pretty helpless.
- Saves energy in long run.
- It's a great law.

Q15. Is there any reasons why you think the law should be kept? (Continued):

- Some people's income.
- There are people picking up cans for a living.
- Helps fund general public, secondary income.
- Young man in her community collects them and it gives him an occupation.
- Saves on petroleum, glass, and other resources.
- Keep environment cleaner.
- It's a good law.
- Keeps the homeless in cigarettes and beer.
- It provides money for the less fortunate.
- It generates money in the economy.
- Keep country clean.
- Another source of income for those who don't have money otherwise...those that go around picking up cans.

Q16. The next few questions are about beverages such as teas, sports drinks, juices and bottled water that currently come in nonredeemable containers. Do you drink the greatest number of beverages that come in nonredeemable containers... (Someplace else?):

- Traveling
- Convenience stores, in car, etc.
- Function.
- Restaurant.
- Not at home.
- Sports activities.
- Sporting events.
- Sports events.
- Sports events and traveling.
- In my car.
- School.
- Gas stations, etc.
- Traveling and sports events.
- no idea.
- In my car.
- When traveling.
- In the car.
- Eating out.
- Road trips.
- Road trips, vacations.
- Stop in the car.
- Sporting events.
- Stores.
- Sporting events.
- At a sporting event, traveling.

Q16. The next few questions are about beverages such as teas, sports drinks, juices and bottled water that currently come in nonredeemable containers. Do you drink the greatest number of beverages that come in nonredeemable containers... (Someplace else?):

- In car.
- Mini mart.
- In car.
- Outdoors...sports events, etc.
- School.
- School.
- Vacation.
- Sports events.
- On the road.
- Sports events on the road.
- In truck.
- Restaurant.
- In car-traveling.
- Traveling or sports events.
- Traveling.
- Ball games.
- Car.
- On the road— traveling.
- Traveling or at movies.
- Traveling.
- Traveling in the car, etc.
- On the go.
- On the road.
- Traveling or shopping.
- Sporting events.
- Traveling.
- Water, if traveling.
- School.
- In car.
- At events/traveling/vacationing.
- When traveling.
- When playing sports.
- All of the above.
- Sports events.
- On the road.
- Car.
- In car.
- Traveling.
- When traveling.
- When traveling.

Q16. The next few questions are about beverages such as teas, sports drinks, juices and bottled water that currently come in nonredeemable containers. Do you drink the greatest number of beverages that come in nonredeemable containers... (Someplace else?):

- When traveling she usually get them.
- Quik trip.
- Ball games.
- Gas station.
- School.
- School.
- While camping.
- With other people.
- Hospital functions.
- Traveling.
- Traveling.
- School and in the car.
- Traveling.

Q17. Do you usually throw away nonredeemable beverage containers, recycle them or do something else? “Something else”:

- Burn them.
- Depends on what the bottle is.
- We keep the containers.
- Re use them for a different purpose.
- Burn.
- Burn them.
- Throw away and recycle.
- Burn them.
- Reuse them.
- Reuse the container.
- Both.
- Burn them.
- Mostly use for holding other things.
- Burn them.
- Burn them.
- Burn them.
- Save them for reuse.
- Refill them and reuse.

Q21A. What, if any, types of recycling programs does your community have? “Something else”:

- Recycling center in apartment building.
- Partial drop off only accept plastic with one or two printed on it.
- Recycling center at apartment center.

Q21B1A. What is the main reason your household does not use curbside recycling?

- Easier to drop off.
- In country.
- In apartment.
- Doesn't agree with it.
- Not much stuff.
- Live in country, not available.
- Live in country.
- Usually take items to drop-off site.
Lives in an apartment, no place to put bins out.
- Animals and kids play it in and make it trash on your yard.
- Forget the pickup dates.
- Employees of Sioux City were snotty when questions were asked and told her that she didn't need to recycle, so she doesn't.
- Available but we need to ask for it— apartment complex.
- Use drop off.
- Only one in the house, not enough to recycle.
- We live in the county and we have to go to the landfill and it is inconvenient.
- Live in country, not available there.
- Lives downtown and takes it to friend to put in their recyclables.
- Live out in the country.
- Just moved into the house.
- Not available, in country.
- Don't agree with it.
- Live out in country.
- Doesn't go through that much garbage because lives alone.
- Use a dumpster, takes back bottle and cans.
- Live in country not available.
- Only 1 person, doesn't drink many beverages.
- Live in an apartment.
- Live in country.
- Not enough to recycle.
- The apartment has a recycling bin.
- Takes it back to the sanitary landfill— wants to do it herself.
- Takes it to the drop-off.
- Do not like the fee they charge.
- They have a place by the apartment to put recyclables.
- Live out in the country.
- Live right next door to a business.
- No curbside containers currently.
- Live in the country.
- Lives in apartment, unable to participate in curbside.
- Good excuse to get out of the house and get some exercise doing it.

Q21B1A. What is the main reason your household does not use curbside recycling?
(Continued):

- Not available to the people who live in the country.
- Lives in apartment complex, doesn't have curbside.
- The program doesn't reach the farm they live at.
- Live in the country.
- Not really sure.
- Not available in the country.
- Live in an apartment, and they have their own recycling.
- Lives in country, doesn't use curbside service.
- Dispose of everything in garbage.
- Live in country not available.
- Not sure which days they pick up, they switch it around.
- Live in an apartment.
- Live on a farm.
- Use drop-off— live in apartment.
- Live in country.
- Live in the country.
- Live in apartment.
- No one has explained to them how to use it.
- Extra money.
- Live in country.
- No container to put it in.
- Live in country.
- Live in apartment.
- Lives in country, curbside not available.
- Lazy.
- Moved in recently, unaware of details of use.
- They live in the country.
- Because we're in an apartment and don't have that option.
- Just 2 of us and we don't use a lot of recyclables.
- Most of what we have is refundable.

Q21C1a. What is the main reason your household does not use drop-off recycling?

- Just lack of interest. If it was more reliable, she would go along with it.
- They just don't need it with the curbside recycling.
- Respondent disabled.
- Don't need it.
- They use curbside.
- Nothing to drop off.
- Date inconvenient.
- They have curb side.
- No time to go there.

Q21C1a. What is the main reason your household does not use drop-off recycling?
(Continued):

- Curbside— more convenient.
- Doesn't know where drop off site is.
- Just don't do it.
- Can't get around very well.
- Remembering to take it with you when you leave.
- Use curbside.
- Because we have curb side too, more convenient.
- Use curbside instead.
- Further away, too far to go.
- Can't walk well.
- Don't need to.
- Just haven't had to.
- Has so little that doesn't bother with it and grandchildren pick up newspapers.
- Not that many of those items, not worth the time.
- We have the curbside.
- Hasn't been explained to them.
- Doesn't have much garbage.
- Don't have enough materials.
- Not necessary.
- Have curbside.
- Burn items.
- They use curb side.
- The apartment has a recycling bin.
- Have curbside recycling.
- Don't like to drive to drop-off.
- Just uses curbside-more convenient.
- No time.
- Takes it to the landfill herself.
- It all goes into curbside.
- Never think about it.
- Curbside is more convenient.
- Doesn't know where its at.
- Use curbside recycling.
- Use curbside.
- Use curbside.
- Curbside is just easier.
- Use curbside instead.
- Don't recycle.
- Do not have drop off at apartment.
- More convenient to use the curbside.
- Don't have a car to get there.

**Q21C1a. What is the main reason your household does not use drop-off recycling?
(Continued):**

- Use curbside.
- Because curb side.
- Just moved to community.
- Use curbside.
- Because they use curbside recycling instead.
- Someone else picks up.
- Don't have enough to recycle.
- Has been able to use curbside for everything.
- Have not had time.
- Curb side is satisfactory.
- Use curbside.
- Use curbside because it is more convenient.
- Live in the country.
- Don't use that many recyclable products.
- Not in the habit and the time constraint.
- Use curbside.
- Uses curbside.
- They don't have a lot of trash— only two.
- People in household.
- they take everything at the curve.
- Use curbside.
- They pick up all at curbside.
- Because you use the curbside— convenience.

Spontaneous Comments:

- The money from unredeemed cans should go to schools.
- There should be county recycling programs.
- Does not buy pop or beer so does not return containers, but walks the rural roads around farm and returns ones she finds in the ditches.
- The deposit should be increased, does not feel enough people value a nickel enough to take a can back. Community does not have a colored glass recycling site and that a lot of glass is getting thrown away.
- Would appreciate having an accessible redemption center in her community.
- Just moved here from South Dakota and loves the idea of the bottle bill and would like to see all states have some form of it.
- Stated that they usually go to Illinois to purchase their cans so that they don't have to pay the deposit and then throw them away.
- Finds the beverage container deposit inconvenient and would like to see it ended. Committed to recycling and would continue to do that.
- Would encourage aggressive curbside recycling program-let people use without having to track down special containers, etc.
- Recycling is an inconvenience, but not enough to stop her from doing it.
- Didn't like the curbside recycling because when it is windy the containers blow all over.
- Would like to see "automatic" redemption machines available.
- Would do the curbside recycling, but it's not possible in rural area.
- Would like to see the deposit amount raised to 10 cents or more because law was put into effect in 1979 and he feels that if it was raised, more people would recycle.
- Suggested that there should be machine redemptions located in Iowa.
- Purchased items where 5 cent deposit was paid and when tried to redeem them was told that the container was nonredeemable because the "deposit" was not printed on the bottle. Was told that the distributors were responsible for that, not the store. Yet, the store charged the 5 cent deposit! Was upset that Hy-Vee was dumping the recyclables and not returning them to the distributors!!!
- Not sure if they have drop-off.
- Stated that the deposit bins that use to be across from the lake were removed and now people dump their trash in the ditch next to their home.
- There is far less litter along the highways since the bill was enacted.
- Husband is conservation officer for the county. She strongly feels the law should be expanded.
- Would rather see cans crushed, with money given per pound. It takes less storage, less waste, and less time. Not sure what they would do in rural areas.
- this person is disabled and wanted to explain some of her answers, although it is difficult for her to recycle she feels it really does offset the inconvenience she has because it helps to clean up our environment.
- While recycling and storing and returning containers can be an inconvenience, it's one that she's more than willing to do. Strongly supports recycling.
- Feels deposits should be placed on fast food containers.